Introductory Address

DELIVERED AT

ST. MARY'S HOSPITAL MEDICAL SCHOOL,

OCTOBER 2ND, 1871,

BY ALFRED MEADOWS, M.D.,

PHYSICIAN-ACCOUCHEUR TO THE HOSPITAL, AND LECTURER ON MIDWIFERY AT THE SCHOOL.

GENTLEMEN,—It has been said by a distinguished political leader that institutions are now upon their trial, and that those only which will bear the test of scrutiny can hope to maintain their ground. Now the delivery of an introductory address at the opening of the medical session is an institution older, I believe, than the memory of any here present; but, as in other and weightier matters, age is not sufficient to protect this or any institution from the ruthless scrutiny of the nineteenth century. Accordingly we find that already at one of our oldest metropolitan schools the practice in question has been summarily tried and condemned. Those of us, therefore, who have any conservative feeling in this matter must be prepared to defend our practice; for undoubtedly there is some danger—a danger which is, I fear, inherent in all novelties—that the example thus set may spread. It is very possible that, if I had consulted my own love of ease and convenience only, I might, perhaps, for this year at least, have been tempted, contrary to my general principles, to become a very radical, not to say revolutionary reformer, in this respect. But I feel very strongly that occasions like the present ought not to be lightly cast aside; and if my personal inconvenience had been multiplied a hundredfold, I should still have felt amply compensated by the pleasure which this opportunity gives me of once more welcoming back the older students of St. Mary's to the home of their medical labour, and of stretching out the right hand of fellowship to those who now for the first time sit on these benches as enrolled or intending students of this school. On behalf, then, of the authorities of St. Mary's Hospital, of my colleagues at this school, as well as in my own name, I give you all a hearty welcome; and may I venture to express the hope that the present session may be to each one of you the commencement of a happy and successful career?

One obvious use, I think, of these introductory lectures is the tendency which they have to keep alive that bond of Freemasonry which ought to exist between all the members of a profession such as ours, and notably between the pupils and teachers of each medical school. It is almost the only occasion in the academical year on which, being free from other collegiate duties, we, teachers and pupils of all years, meet together for the special purpose of being together, and for the mutual interchange of thought with thought; this, I am sure, is a strong plea in its favour. We teachers are not tied on these occasions to the limits of the particular subject which we have to teach; while you, on the other hand, are not necessarily here to learn, but may hope to be interested or amused—though, to avert disappointment, I trust that your hopes in this respect are not very exalted in the present instance.

Before passing to the general subject of my address, let me say a few words in regard to some changes which have taken place in this school during the past year—changes which illustrate very forcibly and painfully the fluctuating character of all human institutions. By the mere lapse of time, we may indeed be thankful it is from no other cause, we have to regret the partial loss of three of our most distinguished colleagues—Dr. Sibson, Dr. Tyler Smith, and Mr. Lane. I say partial loss, because their names are still on our staff, their hearts are yet in the place and in the work, and their spirit still energises the labours of their successors. We have also to regret the loss of Dr. Russell as Lecturer on Chemistry, and of Dr. Payne as Lecturer on Pathological Anatomy. But we can generously afford to congratulate the schools of St. Bartholomew and St. Thomas, which have gained their services, while we welcome their successors, Dr. Wright to the Chair of Chemistry, and Dr. Reginald Stocker as Medical Tutor and Pathologist, an appointment now for the first time made in this school. In the latter, we believe that a colleague has been found to whom you will feel more than ordinarily grateful, if you will use him as he would wish you to do. And here let me take this opportunity of saying a few words in regard to the office of medical tutor which Dr. Stocker now fills. I believe such an appointment may be of the greatest possible benefit to you all. In my early days the system of apprenticeship was still in full force, and I think it is much to be regretted that that practice has almost completely died out; while the only attempt at a substitute for it has been made entirely optional by the College of Surgeons, which recognises as part of the prescribed curriculum twelve months' instruction by a legally qualified practitioner, provided that he holds some public hospital or dispensary appointment. I am convinced that a great deal of most valuable information may be learnt during a short apprenticeship to a general practitioner, or in the manner indicated by the College of Surgeons—information, too, which cannot be obtained so well in any other way, unless it be by the method which we now propose to institute through the medical tutor. His special object will be to help you to use your eyes, your ears, your hands, and, above all, your understandings, so that you may profit to the fullest extent by the teachings afforded in the lecture-room and wards of the hospital. This system will be carried on by individual personal application, and I am confident that the good which he is capable of effecting with each one of you cannot be over-estimated. Often one of the greatest hindrances to advancement in knowledge, by which a great deal of time, labour, and strength are frittered away, is the want of a definite method of working, and an inability to turn to good account the knowledge which is acquired by study and observation. All this we hope Dr. Stocker will obviate, and for your sakes we hail his appointment as a great boon. In the wards of the hospital he will help you to perfect your methods of diagnosis by instruction in the various modes of physical examination of the sick, and on the best way of elucidating and interpreting symptoms. In the dead-house he will demonstrate to you the consequences of disease, while at other times he will test by *viva voce* examinations the progress which you are making in the general course of your studies.

Another novelty, which has been introduced here for the first time this year, is the foundation of three open scholarships in Natural Science, each of the annual value of £40, and tenable for three years, together with an exhibition in Natural Science of the value of £20. For all these, as well as for the appointment of a Medical Tutor, you have to thank the governors of the hospital, who, in the interests of the school, have generously granted the money for these special purposes; and in doing so I am sure they have done a good work—one which will be productive of lasting benefit to the future generations of St. Mary's men, for no one can doubt the enormous value to the practitioner of medicine of a thorough acquaintance with natural science, and there is no time when this knowledge can be so well acquired as at the commencement of medical study. I believe these scholarships will prove a very happy augury for the future career of the successful candidates; and I have great pleasure now in congratulating Mr. Edwards, a student of the University of London, upon the success which he has achieved in gaining the first of these scholarships. I have pleasure also in stating that he has obtained 502 marks out of a total of 650 in all the examination papers. My congratulations are also due to Mr. G. M. Giles, to whom has been awarded the first exhibition, he having obtained 438 marks out of the 650. To both these gentlemen I venture to express the hope that their future may be as bright and prosperous as their beginning. It is, I think, very satisfactory to know that three of the candidates obtained more than the minimum of marks which would have entitled them to the scholarship; so that they lost it, not because they were not worthy of it, but because they were honourably beaten in a fair fight.

There is another subject to which I must allude for a moment, as it may perhaps be a source of needless anxiety to those who are just entering upon their studies: I mean

the alterations in the curriculum prescribed by the College of Surgeons, which requires certificates of having attended separate courses of lectures in Practical Surgery, Practical Physiology, Pathology, and Forensic Medicine. At first sight it might appear as though the physiological course had been greatly extended, but in reality it is not so; on the contrary, the number of lectures on this subject which are now required is actually less than formerly. For whereas formerly five lectures a week were required during the whole of two winter sessions, now you are required during your first winter session to attend only three lectures a week on Practical and Experimental Physiology, and during the second winter session the same number on General Physiology. Your work is therefore lessened during the first two years, and though attendance on rather more lectures is required in the later years, you have then more time at disposal, and your minds will have expanded so as to be capable of taking in much more and with less effort; moreover, the subjects will be of a decidedly practical character. I do not therefore imagine that you will feel particularly burdened, or have any reasonable cause of complaint.

If I may venture on yet one more topic, which partakes somewhat of a personal character, I think you will agree with me that it is a subject for congratulation that we have been able to add something to the comfort and appearance of these school buildings; the older students will I am sure appreciate this, and the new will, I trust, be none the less conscious of it, though ignorant of what there was before.

So much, then, on what I may term local matters. Let me now turn to what I regard as one great object of an Address like this—namely, the consideration of some subject in which, as students of science, and as men seriously engaged in the study and practice of one of the highest, noblest, and most important of the professions, we may one and all feel an interest. But here, at the outset, arises an apparent difficulty; for it may well be asked, What subject can a lecturer choose which shall interest an audience so varied in tastes, acquirements, and scientific knowledge, as the one I have to address? As members of a liberal profession, however, our interests are so wide and varied that the difficulty I have referred to is more apparent than real. There is no profession which shares so largely the common interests of humanity as ours, nor is there any which can compare with it in general scientific attainments; for there is scarcely a department of science to which we are indifferent, and with most of its branches we are more or less intimately concerned. Physiology, or biology, for instance, is so closely related to the various physical sciences that the advocates of what has been termed "the physical basis of life" recognise no distinction between it and them. On the other hand, the upholders of the vitalistic theory, while insisting upon the presence of a distinct and separate force in all organic bodies, as the controller of the vital actions, agree nevertheless upon the importance of a thorough acquaintance with physical science as the very groundwork of physiology. This being so, there is an obvious fitness in the foundation of scholarships in natural science by a medical school; and St. Mary's may, I think, be fairly congratulated on having thrown these scholarships open to the whole body of medical students, thereby encouraging a study which is admitted to be indispensable to a proper knowledge of that without which all our other studies would be practically useless. Upon the subject of biology, regarded in its scientific and religious aspects, I shall have more to say presently; for I propose this evening, so far as time will permit, to consider the question of life theories: believing as I do that it is a subject of the first importance to us all—one, in fact, which underlies all our investigations into the phenomena of disease, which is the basis of our practice, the very groundwork of our therapeutics, and therefore a subject peculiarly fitted for such an occasion as the present. Moreover it is one which may, I think, be made intelligible, and I trust interesting, to the youngest of my hearers.

But if our profession has such varied interests in its scientific aspects, its relation to the great social problems of the day is scarcely, if at all, inferior. It may be said, in truth, that society itself could not exist independently of the profession of medicine. In political life, also, the medical profession is yearly growing in influence and importance, and no politician can with any hope of success aim at influencing the Government of the country if he be indifferent to the value of medical opinion in public affairs. Indeed, I have the best reasons for knowing that the political leaders of both sides of the House would gladly welcome a much larger number of medical men to the House of Commons than at present belong to it. Again, the relation of the clerical and the medical professions is a subject which might well occupy our attention for an hour, not only with interest, but also, I venture to think, with advantage to the members of both professions. We owe a great deal to the clerical profession in times gone by; and, working as we so constantly are side by side, I cannot but think that we might often help each other, and better help those to whom we minister in common, if we worked more hand in hand. Time was when there were no two professions of this kind, but the gift of healing was the special prerogative of the priesthood, not only in Pagan but also in Christian times. In the Egyptian priesthood, and throughout Roman and Grecian history, this was especially the case, and the temples of Æsculapius and of Cos were the standing memorials of this union. Happily, however, that union has long been dissolved, for it was impossible that the science of medicine could advance if its study and practice were kept in the hands of men whose time was more than occupied if their priestly duties were properly discharged.

Thoughts like these, then, suggest many topics for consideration: the relation of medicine to science in general, to society, to politics, or to theology, would be interesting subjects for consideration; but it is impossible to compass all or any one of these fully in one short lecture. I can only therefore suggest some thoughts which seem naturally to rise in the mind when one considers with any degree of earnestness the nature of the work we have to do, and especially the relation of our art to the science of life, and the bearing of the latter on religious belief. I select this subject because I think that one chief value of an introductory address is the opportunity which it gives a teacher of so shaping the mind of the student at the very outset of his career that it may be, as it were, tuned to the work he has to do; and by being set, if I may so say, to the true scientific key, its future harmony with all that is most important in this life may be, to some extent at least, guaranteed. Nor is it to first-year's men or to students only that this thought is applicable; for in these days of rapid scientific advancement, and still more of reckless scientific, or supposed scientific, speculation—of sceptical inquiry and free thought, as it is called, it is well for us all now and again to pause and ask ourselves the question, Whither do our scientific investigations tend? Do they help to confirm, or are they subversive of the cardinal points of Christian belief? If the former, then we may be sure that our method of working is right, our science true, and the knowledge gained to the world will live as long as truth endureth. But if the latter, we may be equally sure that what we think we have discovered is no discovery at all, and will prove to be but the baseless fabric of a dream.

We hear a good deal nowadays, and some people seem to take a special delight in talking about the conflict between science and religion. Now, I am not one of those who believe that true science is or can be in any way or degree opposed, either in theory or in fact, to what is called Revelation. I have too strong a faith in the latter, and too high a love of the former, ever to believe in such a possibility, or to entertain the shadow of a doubt as to their complete oneness in all essentials. It has always appeared to me a simple impossibility that true science and Revelation should ever contradict each other. Speculative science, or, perhaps I ought rather to say, speculative thought, may, and very possibly will, be frequently at variance with revealed truth. But true science, real scientific thought, and most of all the demonstrative facts of science, never have done, and never will do, violence to the undoubted will of the Creator as exemplified in His revealed word. Reason herself revolts from such a thought. For what are we to understand by the terms Science and Revelation? It seems to me impossible to deny that, in regard to their relation to the Great Architect of the Universe, they are and must be absolutely identical. Science I take to be the discovery or demonstration of abstract truth in the laws which govern the natural world, and making deductions therefrom. But those laws must have had a lawgiver: there can be no such thing as self-made law; the very idea is an absurdity. Law, then, implies a lawgiver; and he who created the law must also have created that which the law governs; whether it be in

the organic or inorganic world, in the animal or vegetable kingdom. In short, the whole realm of what we call Nature, governed as it is by law, witnesses to the Lawgiver as the author of its dynamical agency, while, at the same time, the material Universe, as we now see it, is a necessary consequence of the operation of law.

On the other hand, Revelation is nothing more than the proclamation, through certain specified channels, of the laws or the machinery, if I may say so without irreverence, by which God wills to govern the moral world, and to bestow upon man a higher existence than his present life. In fact, if I might venture upon a parallel, I should say that Revelation is the scientific authority for the moral law, just as the recorded observation of facts in Nature becomes the scientific authority for natural law. Both authorities are of equal value as bases of truth, and as expressions of the Divine will; and just as ignorance of natural science engenders among the proud and foolish contempt for scientific things, so ignorance of theological science is apt to engender, with the intellectually proud, indifference to sacred things.

In trying, then, to discover the secrets of Nature, to unfold her laws, and to lay bare her operations, we are all the while endeavouring, though we know it not, to extract as it were more and more of the Mind of the Creator as it lies hid in the works of His Hands. But what, I ask, is this but an attempt to complete another Revelation? And can we suppose that He, who is the author of the written Revelation of His Will, will contradict Himself in that other Revelation which man is permitted to read from the Book of Nature? If this contradiction were possible, then God would be proved to be a Being absolutely less trustworthy than many of His creatures. Such a thought is sufficient at once to negative the assumption, and therefore, I repeat, the idea of any opposition between true science and Revelation—in other words, between the observed Will of God in Nature and His recorded Will in Grace—bears on the face of it its own refutation. Conscious of this fact, the man of science works on patiently and fearlessly, with full confidence that any discovery he makes is in reality an addition to a new Revelation, which is quite as much of God as is Holy Scripture itself. Such a thought should make us very jealous for the truth of science, very careful and painstaking in our observations, temperate in our discussions of disputed points, and, above all, guarded in our speculations; lest, in advocating what is not true, we not only do our best to perpetuate what is false, but we, in fact, slander the Lawgiver, just as much as he does who misrepresents the thoughts, words, or actions of his fellow-men.

I ought, perhaps, to make some apology, or to offer some explanation, for occupying so much of your time with what may appear to you to be a purely theological argument. But no one who is an attentive observer of the general current of thought in these days can fail to see that, while this is an age characterised especially by great enthusiasm in science and in religion, there are not wanting indications of an attempt to bring these two branches of knowledge into opposition. It seems to me, therefore, that it is the duty of those who are in any way connected with the teaching of science to insist occasionally, when opportunity offers, upon the close relation which exists between the two. Their union makes thought perfect; separate them, and you divorce science from what can alone add happiness to knowledge.

The subjects to which I wish now to direct your attention afford a remarkable illustration of the way in which these two enthusiasms are very unnecessarily forced into collision. I mean the subjects of the Origin, and the Nature, of Life. How did life first come upon this earth? What is its exact nature? To neither of these questions probably can, or ever will, any precise and accurate answer be given. But the subject is none the less interesting on that account, and its consideration may teach us one or two lessons; while at the same time anything connected with biology must ever be of the highest importance to us, whose lives are spent in endeavouring to maintain life, and to remove all that tends to destroy it.

In regard to the origin of life, it is, I suppose, beyond question that the earliest known geological record of the existence of life on this earth is to be found in the Laurentian strata of rocks. These, which are the earliest of all the known rocks, belong to what is called the Præ-Cambrian Period; and in them, within the last few years, there has been found a small fossil the organic nature of which was at first questioned, but it is now, I believe, generally admitted that this little creature belonged to the class of Foraminifera, and it has been christened with the name *Eozoon Canadense*. This is undoubtedly the oldest known form of living creature on the earth. We may not, however, affirm dogmatically that, because the geology of that period affords no evidence as yet of life other than that I have mentioned, therefore none existed; such a statement belongs to what I call speculative science, and he is a rash man who would speculate upon the condition of life on this earth at such a remote period.

Tracing life onwards, so far as geological records enable us to do, although there are at present a great many gaps in the series, yet I am not, I think, over-stating the case when I say that from the *Eozoon* onwards there exists in the successive strata of rocks evidence of a gradually ascending series of animals up to almost the highest vertebrata. Whether or not these are related to one another, and man to them all—whether or not the whole animal creation, from beginning to end, is to be regarded as one gigantic family, whose ancestral origin dates from the earliest geological period—is a problem which I certainly cannot pretend to solve. But even if it be so, and should it be demonstrable, as is so confidently predicted by some authorities, that man originally sprang from a shapeless mollusc, the thought need certainly not distress us overmuch, although it does nor perhaps, at first sight, tend to raise our conception of self to be told that "man is descended from a hairy quadruped, furnished with a tail and pointed ears, probably arboreal in its habits, and an inhabitant of the old world"; nor will our pride be encouraged by knowing that "this creature, if its whole structure had been examined by a naturalist, would have been classed amongst the quadrumana as surely as would the common and still more ancient progenitor of the Old and New World monkeys," because, it is added by the writer I am quoting, "the quadrumana and all the higher mammals are probably derived from an ancient marsupial animal, and this through a long line of diversified forms, either from some reptile-like or some amphibian-like creature, and this again from some fish-like animal." But, in case this idea of the origin of our race is not enough to make us humble-minded, we are further told that "in the dim obscurity of the past we can see that the early progenitor of *all* the vertebrata must have been an aquatic animal, provided with branchiæ, with the two sexes united in the same individual, and with the most important organs of the body (such as the brain and heart) imperfectly developed. This animal seems to have been more like the larvæ of our existing marine ascidians than any other known form."

Well, as I have said, if all this be true, and I must say it is a long way from being proved as yet, it does not appear to me in the least degree to affect man's present dignity, or his responsibilities to his conscience and his God. These are in no way touched by his mode of origin; for they arise out of his present condition, and are the natural outcome of that mighty, that stupendous act, which was performed for him, and for him alone, when God became incarnate. Speculative science cannot reverse the history of the Christian era, neither can it explain away facts which eye-witnesses have written for our learning. People tell us sometimes that Christianity must be a myth, because the Bible makes man to be such a noble act of creative power, whereas science, they say, shows him to have descended lineally from a marine ascidian. Having, therefore, such a degraded origin, they tell us, the whole theory upon which his eternal salvation is supposed to be based must be visionary; for why should his salvation be of such importance, and how, in the face of all that science tells us of his origin, are we to draw the line between the race of men who are to be saved and the brutes who are not? To all which I can only reply that Christianity is certainly not based upon any exalted estimate of man's corporeal origin; on the contrary, the same authority which tells me how he is to be saved actually makes him of meaner origin than do these speculators: for in that book I read, not certainly that man came from a marine ascidian, but that he was formed out of the dust of the ground. If then the argument be worth anything at all on the scriptural side, *a fortiori* is it on the scientific.

But to return to my subject. Assuming for the present that the first living creature on this earth was the *Eozoon*

Canadense, the question we have to consider is, Whence did that life come? What, in fact, was the origin of life here? Professor Tyndall, in an essay "On the Scientific Use of the Imagination," says: "Life was present potentially in matter when in the nebulous form, and was unfolded from it by the way of natural development"; and he thinks "there are the strongest grounds for believing that during a certain period of its history the earth was not, nor was it fit to be, the theatre of life." He believes, moreover, that the probabilities are in favour of the earth being then in a nebulous, not a molten, condition; and that what he calls "creative energy" waited till the nebulous matter had condensed, and until other changes had taken place which fitted the earth to become the theatre of life, and then it—that is "creative energy"—sent forth the fiat, "Let life be."

Now, that such an hypothesis as this should be gravely put forward in such terms by a man of Professor Tyndall's position, is, I think, a lamentable thing; and I would solemnly warn you who are just beginning your career of scientific study against being led away by such a flighty—for I cannot call it scientific—use of the imagination. What can be meant by the terms "natural development" and "creative energy" as employed in the passages I have quoted, except it be intentionally to exclude all idea of a Personal Creator in the first beginnings of life. Against such mischievous theorising I protest most earnestly; and I trust you will none of you be led away from the ancient landmarks of the Faith by reasoning such as this.

Sir William Thomson, in his recent address as President of the British Association, after remarking upon the condition of the earth when no life could exist upon it, and subsequently when, though fit for life, none was there, says, "we must not invoke an abnormal act of creative power" if we can find any other "probable solution consistent with the ordinary course of nature." But I would remark, first, that the word "abnormal" is here singularly out of place; for what right have we to suppose that the first act of the Creator's will in originating life on this earth was in any true sense an "abnormal act"? and, secondly, it appears to me the merest folly to attempt to explain the very beginning of a new order of things, such as must have been the first occurrence of life on the earth, by what is termed "the ordinary course of nature," for up to the time when life was first made manifest there was no "ordinary course of nature" in respect to it with which any hypothesis could be "consistent." But when, further, Sir William Thomson, unwilling apparently to recognise a distinct creative act, hazards the hypothesis that life may have been brought here by "countless seed-bearing meteoric stones moving about through space," and "carrying seed and living plants and animals," and that if no life previously existed on this earth "one such stone" might "lead to its becoming covered with vegetation," I think really, if scientific men can gravely put forward such "wild and visionary" notions as these, to use an expression which Sir William himself suggested, then the sooner we look elsewhere than to science for explanations of these phenomena the better will it be. It may be true, as he says, that such an hypothesis "is not unscientific;" all I can say is, if it be not, so much the worse for science.

But, you will no doubt ask, what view have I to propound in place of those which I reject? I reply, that I believe no strictly scientific answer can be given to the question at issue, because we have no sufficient data upon which to found an opinion. It seems to me impossible to separate the idea of mystery from the phenomena under consideration, and therefore equally so to find any explanation by a study of the laws of nature. At the time in question, as I have said, there was no Nature such as we understand it, and no reference to present phenomena can avail to explain what occurred when the circumstances were in no degree parallel. Any such attempt must be futile, and, inasmuch as we have no other data by which to judge, the inquiry must be barren and consequently useless. Life came; that I know. Nature does not explain it; that I also know; and no amount of induction from facts which we can now observe will avail to account for phenomena which occurred when no such facts existed. Revelation and Reason both alike tell me that God willed it, and it was so; but neither tells me how.

I am well aware that this does not satisfy the natural craving for a more perfect knowledge. But we are surrounded by mysteries which we cannot fathom, and this I believe is one of them. There is often, methinks, greater wisdom displayed in knowing what we do not know, and greater courage in candidly confessing it, than in assuming a knowledge which we have not, and mistaking audacity for courage. A lady once asked a distinguished member of the French Academy of Sciences, "What is the use of being an academician if you can't tell what comets are made of?" To which the learned man replied, "Madam, that I may be able to say, I don't know." Such a reply testifies, I think, far more to the true man of science than he who fritters away his imagination over impossible problems.

But if the origin of life be a difficult question, scarcely less so is that of its nature. What do we understand by Life? Is it merely a condition of matter, or is it a force? If the latter, can it exist apart from matter? Is it independent of other forces? or is it correlated with them? These are all most difficult, and, in more senses than one, most vital questions. I have only time briefly to indicate the answers which facts seem to warrant, and I shall not allow myself to wander in the realms of fancy. In all ages there has been, there is still, great diversity of opinion on this matter; but, in these latter days, the opponents may be said to range themselves into two hostile camps: the one advocating what is called "the physical basis of life"; the other contending for a vital force, principle, or essence, differing from and altogether independent of the ordinary physical forces. The former assert that the force or forces which operate in organised bodies, whether vegetable or animal, are the same that exist in the inorganic world: that, in fact, life is correlative with the other forces of nature, and may be, for aught we know, nothing but a modification of heat or motion. In like manner, according to this view, heat, light, electricity, motion, and chemical action, are to be regarded as physical forces when they operate in living bodies; but only as physical forces when met with elsewhere.

In opposition to this, it is contended by the vitalists that life is as much a separate force as motion, chemical action, electricity, or light; that its operations are entirely confined to organised bodies; that its existence cannot be conceived apart from these; and though its operation is never manifested without a corresponding physical change, or the evolution of some physical force, yet that it is altogether independent of these, not correlated with them, not subservient to, but in truth dominating them all, and acting sometimes in direct opposition to some of them, in a way in which no other physical force could act. Such, I believe, is a fair statement of the opposing views of life which are entertained by the leading authorities in the present day, and you will not fail to note the relation which these views bear to the question I have already discussed—namely, the origin of life; and also to another question which is just now exciting great attention—namely, the doctrine of spontaneous generation. It is obvious that if life be merely a correlation of physical force, spontaneous generation, and even the creation of organised beings by physical agencies, is not conceivably beyond the power of man to achieve. Therefore, again, it follows that the acceptance of this view does away with the necessity for a creative act, and makes it possible that the original beginning of life was due to the operation of ordinary physical forces.

But if this question is to be determined by observation and experiment, not by inference or imagination, then undoubtedly the Scotch verdict of "not proven" must be accepted as against the physical hypothesis; for as yet there is not on record, so far as I know, a single experiment or observation in support of it. On the other hand, the whole of the observed phenomena of life—nutrition, growth, reproduction, &c.—are totally unlike anything which is seen in the inorganic world; nay, in many respects these processes take place in direct opposition to the laws which govern the other forces. For instance, gravitation has no necessary influence upon vital action; on the contrary, vital action is not unfrequently exerted in opposition to it. Growth is thought by some to have its counterpart in the formation of crystals, but it is surely not necessary that I should refute this statement; while nutrition has certainly no parallel in the inorganic world, neither is reproduction comparable to any known physical process. While, therefore, I am ready to allow that many of the changes which take place in organised bodies are of a purely physical cha-

racter, and resemble the same changes as they occur in inorganic bodies, yet I cannot avoid the conclusion that the processes to which I have referred are brought about by the operation of a force or forces which are unknown in the inorganic world. Nor do I see why actions so striking, so manifest and peculiar should not be ascribed to the operation of a special distinctive force, just as electricity, chemical action, heat, motion, &c., are regarded as separate forces because of their manifest and peculiar actions; for aught we know, there may be other forces yet to be discovered in the inorganic world which will differ as much from the present known physical forces as these do from one another.

Again, the argument in favour of a distinct and separate force is, I think, greatly strengthened by the consideration of what takes place in an organic body when, as we say, life has fled. Then at once the physical forces, such as chemical action, which have been kept in check, if not by the vital force, at least during vital action, exercise an undisputed sway over the now dead body; and the result is that its component parts gradually but surely lose all trace of structural character, and are resolved into their ultimate chemical constituents: *construction* is at an end; *destruction* is rampant, and no power suffices to avert the catastrophe.

But you will of course ask, If the doctrine of the absolute indestructibility of force be true, what becomes of the so-called vital force when a living thing dies? Unless this can be explained, you may argue, the fact that various physical forces continue to operate in or upon the now dead body, though in a different manner to what they did in the living body, is presumptive evidence in favour of the purely physical, and against the vital, theory of life. I admit the cogency of the argument, and I frankly avow that I am not able to meet the objection definitely. It seems to me, however, either that the vital force, assuming for the moment its existence, differs from the physical forces in this respect; or else I must claim for it that, though a distinct and separate force, it may nevertheless be in some way correlated with them when the conditions of its action no longer exist. The latter view does not seem to me at all to militate against its individuality; and if this concession satisfies the physicists, then all I can say is they are welcome to it.

I often think, indeed, that the controversy is, after all, much more one of words than of ideas, for when a recent writer on the physical side describes "vital energy" as "a mode of motion," and yet declares that "it manifests itself in modes peculiar to itself, and different from any of the other modes of energy with which we are acquainted," and allows the use of the term vital force "to signify this special mode of manifestation," I do not see what more the vitalists can want,—although I submit that the idea of this vital force being only "a mode of motion" is but another illustration of the so-called "scientific use of the imagination."

While, then, it seems to me that the idea of a distinct and separate force governing the organic world, plant and animal alike, and called by the name "vital force," accords best with the actually observed phenomena of life, and may therefore be accepted as, if not true, at least highly probable; yet, on the other hand, even if "the physical basis of life," as it is called, could be actually proved, I should certainly dissent altogether from the view which has recently been put forward by a very distinguished physiologist, to the effect that, as a consequence of such proof, "a complete and widespread revolution in religious belief" must necessarily occur. The writer to whom I am referring expresses his conviction that such a doctrine would be "scarcely reconcilable with the idea that man is made in the image of God," and therefore he adds, "The idea of a God, of Divinity of every kind," must be abandoned, because, "in such a scheme neither a superintending Providence, nor a personal God, nor Christianity, could have place"; for, asks this writer, "how could I believe that I was, nevertheless, designed and created by the power and wisdom of God?"

Now, I think that such language as this, coming as it does, too, from a conscientious and thoughtful observer, is greatly to be deplored. I should, indeed, be sorry ever to make such a statement in regard to any scientific theory, no matter what its scope or tendency. The history of scientific beliefs is full of instructive lessons in this respect, and we cannot yet afford to dogmatise too narrowly on the connexion of science with Christianity in such a manner as to make the one dependent upon the other. This much, however, I do know, that on the principle which I have already enunciated, not even the clearest proof of the so-called physical basis of life, nor the actual demonstration of any single fact in science, however much it might seem to contradict my most cherished beliefs, would have the smallest influence in shaking my faith in the fundamental truths of Christianity. Regarded from a religious stand-point, it matters nothing to me whether the functions of my body, or the growth of a tree, are performed in obedience to what is called a physical or a vital law; neither am I concerned to know whether I sprang from a marine ascidian or from nothing; for I know that all laws and all matter, whether in the animal or the vegetable kingdom, the organic or the inorganic worlds, must have originated from the great Lawgiver, and that He saw that they were good.

I have endeavoured then, gentlemen, very sketchily and imperfectly I know, to give you some idea of the nature of that mysterious principle, force, power, property, or whatever you please to call it, which you are now called upon to study in its normal and abnormal manifestations in the human body; and which it will be your privilege and duty to guard, protect, and cherish, not only against the attacks of evil from without, but from those also within. We are too apt, I think, in the close study which we very properly give to the symptoms of disease, and the care with which we investigate its effects upon the tissues of the body, to lose sight of, or at least to undervalue, the fact that it is not so much material or organic as dynamical perfection which we should endeavour to maintain. Our whole course of study, dealing as it necessarily does with material objects, not only in physiology, but also in pathology and therapeutics, is apt to engender a too materialistic view of disease, and to obscure our view of the morbid processes by which disease is brought about, processes which are essentially deviations from the normal evolution of the life-force, whatever the nature of that force may be. It is so much easier to recognise the effects of what we call disease, the mind comprehends so much more readily what the eye sees and the hand can touch, that we are almost inevitably drawn to the recognition of the organic lesion as the alone cause of the patient's distress, and as the object towards which our remedial efforts should be directed. But it is certain that if we inquire into the matter, we shall find in most cases evidence of what is called functional, or as I would term it, dynamical derangement, long before the existence of organic lesion: and a little thought will suffice to convince us that functional derangement is but another term for the abnormal operation of life-force. For as the force or dynamical agency which is inherent in the life-germ secures the normal growth and development of the body of which it is the germ; so deviations from that force necessarily lead to abnormal tissue change, in other words, to disease, either during growth and development, or in subsequent maturity.

Here, then, we see the importance of studying the laws which regulate the operation of that force, and their effects upon the bodily structure. By observing these actions during health, we may in time hope to gain some clearer conception of the causes of disease—those causes which at present are enveloped in so much obscurity that we can hardly be said really to know the *modus operandi* of any one of them. It is through the subtle workings of the life-force that minute tissue changes are produced; and it is here, therefore, that we must look for the earliest indications of the coming disease. When the grosser manifestations of organic lesion are apparent, it is then too late to trace out the ultimate cause of the evil; and that which, if it could have been recognised and appreciated in its earliest stage, might, perhaps, have been combated successfully by a very simple remedy, now baffles and defeats all our efforts. Recent observations have shown how, by the thermometer, timely warnings of impending mischief are often given long before any other indications are apparent. It is in this direction that we must look for future advance in medicine, and each one of you may, if you will, be of infinite service in this work. There is yet an abundant harvest for the honest, painstaking, humble labourer in the medical vineyard. To this work I bid you go forth, full of bright hopes, and strong in your determination to overcome difficulties by patience, courage, and perseverance. But remember always that the one object of your lives should be to seek after and

to maintain Truth. Be true to yourselves, and you will be true to your professional calling, than which there is nothing higher or grander in this life. Truth should penetrate every act of your professional, as of your private, life. It will make you careful in diagnosis, and sound in therapeutics, because it will enable you to sift the apparent from the real, the false from the true. It will help you to weigh symptoms, to estimate them at their true value, and by knowing accurately, that is, truthfully, the inward conditions, of which symptoms are but the outward expression, you will be able, with full confidence, to apply the true remedy.

But success of this kind is only obtainable by the persistent practice of truth in every minute particular of your daily life. You cannot play fast and loose with truth and falsehood; for if you do, the latter will in the end be sure to prevail. And remember that "Falsehood is never so successful as when she baits her hook with Truth; and that no opinions so fatally mislead us as those that are not wholly wrong—just as no watches so effectually deceive the wearer as those that are sometimes right." Bear in mind, too, that a man who is always truthful cannot commit sin: for truth and purity go hand in hand; but falsehood is sin incarnate. As men of science, then, prove yourselves worthy of the name by steadfast devotion to truth; and in purity of life follow her example to whose blessed memory this school is named; so that when the time comes that you must change this life for another, you may humbly bow your head in trustful submission to Him who well knows how to recompense those who in the cause of truth have done what they could.

Abstracts
OF THE
INTRODUCTORY LECTURES
DELIVERED AT THE
VARIOUS MEDICAL SCHOOLS OF LONDON
AT THE
Opening of the Session 1871-72.

CHARING-CROSS HOSPITAL.

INTRODUCTORY ADDRESS BY DR. GREEN.

THE lecturer, in the first place, alluded to the irreparable loss the hospital and school had sustained in the death of the late Dr. Hyde Salter. He then proceeded to review the great improvements which during the past year had been made in the hospital and school premises—the new wards and the increase in the number of beds, the new dissecting-room, library, post-mortem room, and physiological laboratory; and the valuable additions which had been made to the staff. In seeking for a special subject upon which to address his audience at the commencement of another medical session, Dr. Green said that that which appeared to him to be the most deserving of attention was the necessity which exists at the present time for a more practical study of medicine and surgery. The time was gone by when a few hours spent in the dissecting and lecture rooms, and the committal to memory of a small volume of multifarious facts, was all that was required of the medical student. The medical profession was essentially a practical one, and medicine no less than surgery demanded a practical education. The lecturer then proceeded:—"It has been argued, and students have left their medical schools with the impression, that a practical knowledge of our profession is readily acquired after going into practice—that the engagement in the attempt to treat disease brings with it the knowledge which it is necessary to possess. I do assure you, gentlemen, that nothing can be more erroneous. I do not mean to deny that an educated student, a man well grounded in what we may call the elements of medicine and surgery, may and does derive very much additional knowledge from the practice of his profession. On the contrary, an educated man engaged in practice is in the most favourable position for acquiring an increasing store of knowledge. He starts upon a firm basis, and one upon which he can year by year continuously and successfully build. But I do maintain that if a man upon leaving his hospital studies does not possess a large amount of practical knowledge—knowledge, remember, which can only be obtained by systematic work in the wards and in the out-patient-room—the chances are very much against his acquiring this knowledge after he has once commenced to practice. If he does not acquire such essential elementary accomplishments, for example, as how to put up a fracture, how to palpate the abdomen, how to distinguish between systolic and diastolic cardiac sounds, and how to recognise urinary deposits under the microscope, whilst he is a student, the probabilities are that he will never do so at all. It is to prevent the possibility of the student finding himself in such an unenviable condition that the examining bodies have recently made changes in the curriculum and in the character of the examinations, and it is in order to stimulate you to do your best to prepare yourselves for all that will be required of you that I have ventured to bring this subject before you on the present occasion."

After alluding briefly to the nature of examinations, Dr. Green continued: "Be assured then, gentlemen, that what will be required of you is such a knowledge of your profession as is not to be obtained from the attendance of classes or from the perusal of books, but can be acquired only by the practical study of disease. This will be required of you, not only by your examiners, but also by the public. The time, we believe, is rapidly passing away when mere professional tact will suffice to ensure success in the practice of our profession. Tact must always be an important element in the acquirement of success, but as education advances, and as medicine and surgery continue to approach that high position which they so justly deserve, we shall find that there is an increasing demand for real knowledge, and that tact without this will no longer be accepted." In order to obtain this knowledge the lecturer impressed upon the students the necessity of availing themselves of all those opportunities which, in consequence of the regulations passed by the examining boards, were presented to them—holding clerkships and dresserships with the determination to acquire from them all the practical knowledge which the filling of such offices is so eminently calculated to convey. The various means provided for practical instruction should be utilised, and these should no longer be regarded as optional, but as necessary parts of education.

Dr. Green then pointed out the importance of students studying disease *for themselves*, and said:—"If I mistake not, the knowledge we derive from even one half-hour devoted to the careful and painstaking study of a single patient will be more valuable to us than many hours spent in listening to the teaching of others. It is this kind of clinical work which appears to me to be the great want in our education at the present day. We do not, I think, sufficiently recognise its importance, and hence, except in the cases of those comparatively few students who are fortunate enough to secure resident hospital appointments, and of some of the more studious clerks and dressers, it is almost unknown. We do not mind going round the wards or into the out-patient room, and listening to the clinical remarks of our teachers, but we don't consider it at all necessary to examine the patients for ourselves, and even if we are asked to do so, we perhaps hardly take the trouble to do it in anything like a thorough manner. And yet, surely, it is from such study as this that we are most likely to derive that practical knowledge which we shall stand in need of when we are thrown upon our own resources. How many hours of our student life do we spend in the dissecting-room studying the dead body. Ought we not to spend a more proportionate amount of time in the wards studying the living body?"

The lecturer then remarked upon the insufficiency in the amount of time set apart in the curriculum for systematic clinical work, and continued:—"Examine the patients for yourselves. Form your own conclusions as to the nature of their diseases. Decide upon the plan of treatment you would adopt, and make your own prognosis. And by all means be very thorough in what you do. Spare no pains and grudge no time in learning all that you possibly can of the case you are observing. Remember that more mistakes are made from a want of care than from a want of know-

ledge. Do not attempt to observe too many cases at a time. One done well is far better than a dozen done incompletely. Watch the same case carefully from day to day. Note the natural course of the disease, and the way in which it is influenced by remedies; and if it should terminate fatally, let nothing prevent your being present at the post-mortem examination."

The lecturer concluded by an allusion to the rapid advances which are being made in the knowledge of pathology and therapeutics, and by an exhortation to the students to use all diligence to acquire during their studentship what in the present age would be required at their hands.

ST. GEORGE'S HOSPITAL.

INAUGURAL LECTURE BY DR. J. CLARKE.

DR. J. CLARKE had amongst his hearers a large number of eminent professional men formerly connected with the professional staff of the hospital. Having given a hearty welcome to the students, Dr. Clarke remarked that they were about to be introduced to a profession which had been truly called "Godlike" in its aim and tendency, unselfish and elevating in its practice, with duties great and laborious indeed, but allowing of pleasures which, if rightly esteemed and viewed, were equally elevating, grateful, and attractive —the grand aim and object of which was, or ought to be, the happiness and comfort of mankind. He was always proud to acknowledge the reciprocity of good feeling which had existed between the teachers and pupils of St. George's Hospital, and he trusted that in the future the dangers of lodging-house life might be avoided, giving comfort to the student without expense, freedom without licence, pleasurable enjoyment without dissipation. Great and wellnigh insuperable difficulties, he well knew, lay in the way of compassing such an object, but he did not despair of one day seeing it fairly advanced towards accomplishment. The hospital now possessed 350 beds, large enough for all practical and scientific educational purposes; not so large as to weary and confuse the student by its size and number of patients. There was a medical school, composed of buildings most admirably adapted to their purpose, and a museum almost equal in number and variety, and quite equal in the skilful arrangement of anatomical preparations, to any other in London. Having adverted to the multiplicity of the subjects with which the students would have to deal, their varied character, and the novelty of the language in which information was conveyed, the numerous examinations which the students would have to undergo, the lecturer said he could well understand all these perplexities, although in his time of studentship examinations were less numerous, and examiners less of a bore than they were at present. He insisted, though, strongly upon a knowledge of the classical languages, without which it was impossible to understand the nomenclature of disease, or the terms commonly used in medical books. Turning to the system of prizes, the lecturer remarked that much had been said for and against it; and continued as follows:—

"Our profession is a peculiar one in many respects. Many questions of a delicate nature are submitted to us; we are often entrusted with matters involving the dearest and closest interests of patients; it is therefore more incumbent upon us to show ourselves worthy of this confidence and deserving of this trust. We hear much of *medical* ethics. I make so bold as to tell you they do not differ in their nature, their office, or their tendency from *general* ethics—from those which hold good between man and man. The principles of each are identical, varying only in strictly professional details. A gentleman in our profession is a gentleman everywhere. Courtesy in our relations one with another, honesty, unselfishness, self-respect, self-reliance, a desire to do unto others as we would they should do unto us, are, I venture to submit, as good medical ethics as any other ethics, and fully as advantageous as any others; and you may be assured that their practice will never lead you wrong. It was owing to principles such as these that those illustrious men whose names adorn and immortalise the rolls of our hospitals fought the battle of life, and rose to their great and well-deserved fame and eminence. Let us try and emulate their example, if we may not all attain to the same results."

The lecturer concluded with the noble quotation from Lord Bacon, in which the "glory of the Creator and the relief of man's estate" are laid down as the ultimate ends and efforts of man in his pursuit after knowledge.

GUY'S HOSPITAL.

DR. OLDHAM'S INTRODUCTORY ADDRESS.

THE last thing which a student will lack at Guy's Hospital is opportunity. But he has to apply his mind to the acquisition of a large and increasing section of knowledge; and above the industry it demands, there is that higher knowledge, the government of his own mind. To train, refine, and discipline the intellect, and to keep it in alliance with the moral sense, is what a student is urged to do: but he must do it for himself. Two elemental faculties of the mind, by which he can question its operations, and control them by the force of his will, enable him to comprehend the power he possesses of self-culture. But to bring these faculties into constant exercise, so as to know the pursuits and progress of the mind, and to judge impartially of them, needs vigilance and resolution. The position of a student placed here without restraint derives great security from the action of this self-protective habit. The mind is never at a standstill, and it cannot be neglected for any length of time and then be found the same pliant instrument it was before. We must recognise innate differences in mental capacity, and medical science and practice gain by variety of power. Sometimes a student is discouraged in being distanced by the rapid successes of a brilliant intellect, and he may lose the impulse to excel, and drift into indolence; but experience shows that, taking the resources of the whole man, the ultimate success of those who have striven to discipline their mind, ennoble their moral nature, and learn their profession, is remarkably equalised. The study and practice of medical science afford scope for mental culture, and urgent motives for its exercise. How imposing the portal through which you first enter! You are not chained down to the drudgery of a reiterating act, but your minds are engaged on the study of the physical sciences, or a series of facts of infinite variety and absorbing interest, one set leading on to others, and then their order and their rule of law. You require to know these where they touch and expound medical science; their study is a leading element in a liberal education, teaching the mind to lay well hold of fact, storing it with ideas, imparting intellectual tone and the best discipline.

There is an obligation on us all to raise the social position of our profession. But all other expedients are superficial compared with the great one of a more extended and elaborate preliminary education. It is from the highly-cultivated men amongst us that our position—such as it is —is maintained, and when from the ranks we see one conspicuous as surgeon, teacher, author, for honour, high-mindedness, and a polished courtesy, we may indeed rejoice —as in the instance of Sir James Paget—that the highest title which in this country is awarded to a practising surgeon or physician should have been conferred on him.

The number and diversity of the subjects in the study of medicine are favourable to mental activity, and industry is essential to master its details. The senses, too, are quickened by them; and the training they go through, not only by direct and combined exercise, but through the aid of various instruments, is daily exemplified. You are required in a great measure to work out by your own observation your knowledge of disease; and there is no man so hopelessly bewildered as he who, when he is called upon to treat disease, has to turn from his patient to a description in a book.

You are not, however, to be devoted to an unrelenting toil. We who know the laws of health proclaim that to keep the mind in a jaded state is to enfeeble it, and that recreative pursuits, well selected and subordinated to your main pursuits, strengthen the body and relieve the mind.

It is in clinical study that all you have acquired is to be condensed, and you cannot over-estimate the importance of carefully reporting cases. It brings you also into close relation with your teachers, who soon see what of earnestness there is in you. In searching into the causes of disease, you first see how character is unmasked; and in this

respect the hospital is a large confessional, in which you are invited to observe, for the benefit of the patient, the promptings of conduct and the deepest recesses of the heart. You here also learn something of the lot and condition of the poor, who, as a rule, will command your respect. It is in our Lying-in Charity that we see the poor in their worst attire, but their truest aspect; and there in times past I have often witnessed the greatest suffering with the least complaint—the purest affections in the commonest hovels—the deepest gratitude for the smallest benefits, and abject poverty with the generosity which gives the most of what it least can spare.

A strong motive for professional culture ought to arise in your anxiety to repay the expectations of those who send you here, and another to enable you to meet those momentous incidents of practice where death and life are trembling in the balance; and, lastly, you are urged, as a supreme duty, to adore and magnify the Giver in the cultivation of his highest gifts.

KING'S COLLEGE.

INTRODUCTORY ADDRESS BY PROFESSOR RUTHERFORD.

AFTER stating that the chief objects sought for by those who profess medicine are to preserve health and to cure disease, Dr. Rutherford pointed out that a knowledge of the healthy state and of the conditions necessary for its preservation, must necessarily precede a knowledge of the diseased state and the means required to rescue an individual from it. After referring to some of the attractive features of biological science, he stated that, although medical studies deal to some extent with metaphysics, they nevertheless chiefly concern the two great factors of the physical world—to wit, matter and energy. "The first great idea which those who enter upon the study of living beings should lay hold of is, that the matter and energy which are found in them are derived from the dead world around them. Things that live, although they can transform matter and energy in the most marvellous ways, can neither create nor destroy them. A continual stream of matter and energy flows from the dead into the living world, serves its time there, and returns to the dead world again.....Seeing that the matter and energy found in the organic come from the inorganic world, it might be anticipated that the changes through which they pass in the world of life are subject to the same laws which govern them in the world that is lifeless. Such appears to be the case. The law that rules the chemical changes taking place in a muscle does not differ from that which regulates the chemical changes that go on in a steam-engine. The laws that preside over the movements of the blood are just those which control the movement of any other liquid. The metamorphoses which matter and energy undergo in the living world are many of them infinitely more complex and difficult to follow than those through which they pass in the inorganic world. It is therefore necessary that one should be acquainted with the character of the phenomena found in the inorganic ere we attempt to follow or comprehend the more intricate nature of those found in the organic kingdom. In short, the chemistry and physics which immediately concern lifeless things must be studied before the chemistry and physics which immediately apply to things that live can be comprehended. In other words, a knowledge of inorganic chemistry and physics must be acquired before organic chemistry and physics can be understood."

He then, with the aid of some familiar illustrations, explained the methods of observation and experimentation by which facts in natural science are ascertained, and pointed out the disastrous results that follow hasty observation, careless experimentation, too rapid digestion of facts, and the substitution of fiction for truth. The truly scientific method of investigating the events of life was begun three-and-twenty centuries ago by Hippocrates, and fortunate would it have been had the path which he opened up been pursued; but the dark ages enveloped it in obscurity, and it was not fairly reopened until our immortal countryman Harvey found his way into it, and Bacon shed the light of his genius upon it.

In indicating the present position of medicine, the lecturer stated that in inquiries regarding living things in a state of health or disease students should particularly attend to—1. Their physical or structural composition. 2. Their chemical composition. 3. The functions or actions which they perform. He stated that the four great essential subjects in medicine are physiology, pathology, hygiene, and therapeutics, and proceeded to explain what was meant by these subjects, and to give an account of their present position. "The most advanced part of physiology and pathology is that which refers to the structural composition of the body. Our knowledge of the chemical composition of the body is not so advanced, because of the excessively difficult nature of the inquiry. Very much has been learned regarding the actions of the body in health and disease; but although we know a great deal regarding these actions, we are far from having ascertained all about them. No stone, however, is being left unturned. The secrets are being sought out with the aid of the most refined physico-chemical instruments and processes.

"The causes that give rise to the phenomena of life have, ever since the first glimmerings of science, formed a deeply engrossing subject for inquiry; and assuredly, as time runs on, the interest and importance that attach to such a question, so far from diminishing, continue if possible to increase. For centuries there has been a keen controversy between the vitalists and physicists. The vitalists first took up the ground, and ascribed the operations of the body to spirits—good during health, and evil during disease. Hippocrates, some three-and-twenty centuries ago, started the hypothesis that the actions of the body are presided over and directed by a spirit termed Nature. Aristotle called this spirit Vegetative Soul; and said that it is common to all plants and animals. In modern times this spirit, or principle, has received various names, and its existence is still believed in by some physiologists. By them it is looked upon as directing the various operations necessary for the life of plants and animals. In opposition to this idea, many physiologists have come to the conclusion that the existence of such a spirit is a myth; and they believe that the ordinary vital operations of plants and animals are due to the ordinary attributes of matter and energy. There has been some extravagance on both sides. Some vitalists have called the holders of the physical view materialists, even if they refuse to believe that a cabbage is possessed of a vegetative soul; alleging that if we deny the existence of such a soul in a cabbage, we must deny the existence of man's rational soul, and even the existence of a God. On the other hand, some upholders of the physico-chemical views have absurdly maintained that the properties of matter and energy may be regarded as sufficient to explain all mental phenomena. The controversy is still unsettled."

In alluding to the spiritualists of the present day, the lecturer said: "We have been informed by a noble lord that a certain Mr. Home is able to defy the law of gravitation to an extent which is, to say the least, very remarkable; we have been seriously told that he can fly through the air by a mere effort of his will. The number of those who possess this marvellous power would seem to be very limited; and it is fortunate for cab proprietors and railway shareholders that the number is likely to remain a small one. As yet Mr. Home and his disciples do not seem disposed to make a public exhibition of their marvellous powers. Probably they still continue to ride in omnibuses, cabs, and railway carriages, and find it safer to trust themselves to such modes of conveyance rather than to their newly discovered method of aërial flight. Spiritualism of the sort now fashionable is not so very novel as the spiritualistic media would fain have us believe. Within the memory of most people miracle-workers have been ever and again starting up. The tricks of the mesmerists, spirit-rappers, and table-turners made dupes of a great many simple-minded persons. Possibly the media have now become so dexterous that they can make dupes of persons whose minds cannot be exactly charged with simplicity; but, nevertheless, it is probable that ere long their tricks will be exposed, just as all similar tricks have been."

Hygiene, the lecturer said, is in a state of considerable advancement. We know well the ordinary conditions necessary for preserving health; but we have yet much to learn regarding measures sufficient to protect man from the malignant agencies that produce disease. Nevertheless, the great success of vaccination leads us to expect great achievements in this direction.

He explained many of the reasons why therapeutics are in a state which, though rapidly improving, is still far from being satisfactory. "The mechanical appliances adopted by the surgeon are, on the whole, eminently satisfactory. Nothing can surpass the cunning and dexterity with which he uses his knife to remove a diseased member. Still, in the majority of cases, the use of the knife in disease implies the confession that the surgeon has failed to arrest the diseased condition of the part. Both surgeons and physicians experience extreme difficulty in exercising a really curative influence over disease. Patronius Arbeter was wrong, however, when he said that "a physician is nothing but a satisfaction to the mind." Happily there are many diseases which can be completely cured, and a great many more that can be influenced for good, by the use of remedial measures; but still the achievements of medical men are circumscribed by a circle which, though ever widening, is yet a narrow one. The chief reasons for this limited success are, that we are still unacquainted with many of the healthy actions that take place in the body. The causes of many diseases are as yet unknown. It is not yet possible to ascertain precisely what parts of the body are affected by some diseases. Obscurity still hangs over the significance of many of the altered bodily actions that are observed in disease. Some of these actions have a fatal, others have a beneficial, tendency, and the difficulty is to know which to favour and which to repress. The actions of many drugs, and other remedial agents, are only partially known, and even where these actions have been ascertained there remains the difficulty that the precise influence of the drug differs in different individuals, and even in the same individual at different periods of his life. But we are not possessed of the power of ascertaining beforehand what are all the respects in which one man differs from another, and therefore we are not by any means always able to predict what will be the precise influence of the remedial measures which we adopt. Hence it is that medicine does not present the characters of an exact science. We cannot, in many instances, say what is or what will be, nor can we always with precision wield those powers which we already possess for influencing the constitution of the body and its actions. We have, for the present, to weigh probabilities, and to hit the mark as nearly as we can. This fact need not, however, dismay those who are entering upon the study of medicine. She is daily becoming more exact, and the pleasure and satisfaction which result from an honest and earnest attempt to render her more scientific quite outweigh any disappointment one may be inclined to feel at finding that she lacks much of that precision which gives such charm to physics, chemistry, and mathematics. The great fact to be remembered is, that medicine must be pursued in a scientific spirit. Only by cautiously comparing and weighing all the facts of any case, and coming to just conclusions from these, can we hope to advance medicine. We have to bear in mind that whenever we give a man a dose of medicine we really perform an experiment—an experiment which is important to the person and important to the science of medicine." The lecturer said: "Observe all the conditions of the experiment, and write them in a book, so that they may never be forgotten by your memories, which are treacherous at the best. Old Hippocrates showed us a splendid example. He wisely saw that to get at accurate facts is the backbone of all science. He did not content himself with remembering his facts; he wrote them on tablets, so that they might never be forgotten or altered. If you will adopt the Hippocratic plan, if you will be careful in ascertaining the facts of a case, and cautious in the inferences you draw from them, you will in due time add many a stone—perhaps many a precious stone—to the as yet unfinished temple whose portal you are now entering. The temple is, indeed, far from being complete. Many niches are still empty; many stones lie strewn about; many foundations have yet to be laid; yet all is activity. The stones are getting into their places, the walls are surely rising, here and there indeed a gilded pinnacle crowns a wing. Your ears may be at first somewhat dinned by the noise, your eyes a little distracted by the hurryings to and fro of the workmen and their machinery; but you will soon forget the noise and the hubbub when you earnestly join in helping to rear an edifice so truly noble as that of Medicine.

"A great and attractive feature connected with the prosecution of medicine is the open-handedness that everywhere prevails with regard to discoveries. The moment a medical man makes a discovery, however valuable, he tells it to all the world, so that everyone may have the advantage of any good contained in it. In consequence of this absence of secrecy, it is in the power of everyone to acquaint himself with and to adopt any measure that is proposed for the treatment of disease. Nevertheless, although there is free intercourse between medical men in every part of the world, medical science presents somewhat different aspects in different countries. Diseases which are rare in this are sometimes common in other lands. The type of a disease which may be rare here may prevail elsewhere. The mode of treating some diseases differs in different schools. The methods adopted in the tuition of medicine are not everywhere the same. It often happens that certain schools are famed for the facilities with which certain subjects can be studied; for example, although the surgery of England is in many respects decidedly superior to the surgery of France, nevertheless students have greater facilities for the practice of operative surgery in France than they have in England. Although physiology and pathology are in many respects just as advanced in England as they are in Germany, nevertheless many inquiries connected with these subjects can be prosecuted in Germany with less expense and greater facility than in this country; for in Germany the Imperial powers liberally support physiological and pathological laboratories, and happily in that country physiologists and pathologists are not pursued by a herd of anonymous scribblers, who, while they wink at all manner of *sports*, however cruel and meaningless, are ready to thrust their waspish stings into anyone who dares to decapitate a frog in the interests of the healing art. Seeing that the aspects of medicine are not everywhere alike, it is very important that you should visit different schools of medicine in order to get an education as comprehensive as possible. It is well to visit the chief schools of France and Germany. The Germans and the French have much to learn from us, but at the same time we have not a little to learn from them."

The lecturer concluded with some practical remarks concerning the mode of study which should be adopted by the students.

LONDON HOSPITAL.

INTRODUCTORY ADDRESS BY DR. W. J. LITTLE.

DR. LITTLE referred specially to eminent men formerly connected with that hospital, and made a retrospect of the progress of medicine in modern times. He took occasion, in passing, to reflect on the slight offered to the memory of Jenner by our Government, which first set up Jenner's statue in Trafalgar-square, and then carried it away to Kensington, where it is now hidden in an obscure spot. Dr. Little looks hopefully on the prospects of medicine, quoting from Cabanis that "Good practitioners in medicine are all men full of confidence in their art. This confidence is perhaps, in some respects, as much the cause as the result of their success." He himself expressed the hope that, before forty years shall be over, medicine may have made some impression on such diseases as cancer, hydrophobia, and cholera.

Referring to preventive medicine and sanitary science, the lecturer said: "It will rest with the rising generation of physicians, by their continued zeal in the elucidation of obscure points in the avoidable causation of disease, to take care that the seed of future honours, sown broadcast by the medical man, unrequited except by his own conscience and the admiration of his professional brethren, shall not be appropriated by other professions which have not borne the heat and burden of the day. May not our profession justly claim that the future Health Minister of the three kingdoms shall be selected from the ranks of medicine, as a tribute to its past labours in the cause, and an acknowledgment that the education of the physician can alone insure thorough comprehension of the evils sanitary science undertakes to combat."

Dr. Little concluded with good advice to the students in the following terms:—

"Never be content with superficial observation; whatever you undertake to inquire into, look below the surface of

things, employ all your senses in your investigations, avail yourselves of all the modes of inquiry taught you. In the present day it is useless to be merely a good auscultator, well up in the chemistry of the urine, familiar with the names and varieties of the excretions, skilful at anatomy and the setting of fractures; no, you must apply *thoroughly* all your ability. In fact, the English word *thorough* should be your watchword and guide in all your doings.

"Gentlemen, much has been handed over to you by your predecessors; much is therefore expected of you, and that promptly, if you would emulate the generation now passing away. Schiller says—

"'Wo viel Licht ist, ist starker Schatten.'

Your first duty is so to profit by the instruction here provided that you may make capable members of an active, honourable, and useful profession. Many of you may hereafter be wholly engrossed in worthily performing the offices of the medical man—*Non omnia possumus omnes*: few of you who may not be able to hand the torch of science to your successors the brighter for the labours you have employed in tending it. Some of you, it will be expected, will, as London Hospital men, leave behind you names as honoured as those of Blizard, Headington, Pereira, and Billing, and others whose busts adorn this place.

"As Schiller says also of Science and her followers:—

"'Einem ist sie die hohe, die himmlische Göttin, dem andern
Eine tuchtige Kuh, die ihn mit Butter versorgt.'

"Let it be your resolve, whilst seeking an honourable existence through your profession, to cultivate it more in the spirit of the first of these lines than in that of the second. This alone can make you satisfied with it."

MIDDLESEX HOSPITAL.

INTRODUCTORY LECTURE BY DR. JOHN MURRAY.

THE lecturer commenced by urging the new students of medicine to inquire of themselves whether they were adopting a profession for which they were naturally fitted. According to the comparative vivacity and force of a young man's intellect, his fitness for a profession should be gauged. If a youth afforded no evidence of predominant interest in literary study and the delights of scholastic ambition, he ought not to be encouraged to adopt a profession requiring the considerable amount of application to such pursuits demanded by medicine. He referred to the unhappy instances daily to be seen, of men possessed of excellent abilities engaged in the half-hearted pursuit of occupations wholly unsuited to their natural turn of mind—abilities which, if they had been directed into the proper channels, would have placed the possessors in positions in which they would not only have excelled, but would have increased their enjoyment of life—perhaps also the depths of their pockets, and certainly their value to the public. Most young men's minds, he believed, afforded a clue, if properly scrutinised, to their natural fitness, to ascertain which was the duty of parents and guardians; and this was becoming daily more and more imperative as free trade, the correlative of natural selection, was, in this country at least, in the ascendant. To make the most of this natural fitness, the preliminary education of the young man should be of a most liberal character. The great acuteness in the observation and treatment of disease displayed by men of the present day distinguished in medicine does not, he believed, rest on the possession of medical facts alone, but on a sound general education, aided by natural ability for the practice of their profession. He decried the growing tendency amongst the advocates of the real, or modern, or so-called useful studies to underrate the value of classics, by the study of which we are made acquainted with the *Alterthumswissenschaft*, the spirit and power of Greek and Roman antiquity, learned from its original works. A liberal education should make a man know himself and the world, not in a narrow sense, as Matthew Arnold expresses it, "to make a man a good citizen, or a good Christian, or a gentleman, or to fit himself to get on in the world, or to enable him to do his duty in that state of life to which he is called. There is a wider and more noble sphere—to do good to mankind, and to advance his fellow-creatures."

After offering a few words of advice as to the manner in which the student of medicine should proceed in surmounting the mass of work before him, Dr. Murray continued: "To assist and guide the student in his studies, medical schools have been formed, in which more or less compulsory attendance is required; the different subjects taught being arranged in such a manner as to afford a very considerable amount of assistance to the pupil. Our metropolitan system of medical schools, as it at present exists, has found many able opponents, men whose opinions carry with them great authority, and in whose views I am prepared largely to sympathise. But, while we should sanguinely look forward to a future still greater than the present in the medical education of the metropolis, there still can be no doubt that even now, with its disadvantages, London affords many unrivalled opportunities for the study of medicine unattainable elsewhere.

"The mission of a medical school, it seems to me, should be not alone to cram the student with facts, but to effect as far as possible the *Gesammtbildung*, the total medical cultivation of the student in his strictly medical studies. What is to be avoided is, that the instruction degenerate into a preparation for examination, instead of providing that the pupil may have the requisite time to come steadily and without hurrying to the fulness of the measure of his powers and character; that he may be securely and thoroughly formed, instead of being bewildered and oppressed by a mass of information hastily heaped together. Do the medical schools of London effect this? That there is much room for improvement in their teaching, that the tutorial system might be with advantage grafted more largely into them, less stress laid upon certain subjects, and other compulsory courses instituted, I am very strongly of opinion; but that they do much to develop the *Gesammtbildung* I most certainly assert. If this desirable object is not attained, it is not entirely the fault of the schools. What faults they do possess are in a great measure due to the baneful influences of certain of our licensing bodies, which do not demand a sufficiently high standard for qualification, and do not allow the schools time to develop the student. That systematic teaching is, as asserted, carried to an excess in them I do not believe; in fact, the very reverse. That students should be allowed to study wheresoever and howsoever they please, as recommended by not a few, is a doctrine which I think should be resisted, as opposed to reason and a retrograde step in education. Were it possible, as is proposed, to render the examinations all sufficient as tests, which I deny they can be made to be, the more or less want of system in the preparation for these examinations would entail a waste of time and strength, and, by reaction, tend to reduce the standard of examinations. It is this absence of system which I believe is the bane of education in this country. In everything we lean upon our energy and wealth to overcome the drawbacks necessarily dependent on our want of gradual training and method. We forget that 'if the iron be blunt, and a man do not whet the edge, then must he put forth the more strength; but wisdom is profitable to direct.'

"How are students, I would ask, to be guided in their studies unless in a systematic school? where are they to learn exact habits of mind? Not in books, certainly. They must be brought to the water and taught systematically and gradually how to drink. But they must be compelled to do so; and I believe, in spite of all that has been said to the contrary, this can be done if properly tried. Most students are willing and anxious to learn if intelligently managed; and if the teacher fail, it is, in the majority of cases, as much the fault of the teacher as of the pupil. If there are those indisposed to apply themselves to their work, much can be done to make them learn, if taught methodically and under a compulsory system. Were it not for our compulsory system, however, what would become of such men? One would stay at home and cram; another would go from place to place, 'taking tithe of mint and anise and cummin,' but neglecting the principles and more important matters of his profession, picking up crumbs which he would mould together into some crude idea representing his peculiar notions of the theory and practice of medicine; while only a comparatively small number would pass their examinations possessed of a comprehensive medical education, and that chiefly through their inherent natural good qualities. A considerable

number would probably be able to pass the examinations, however strict and searching they might be, but their minds would not have been gradually formed, and taught that exactness of reasoning which is likely to be engendered by a proper system of teaching, such as is aimed at in some at least of our medical schools. I would have you, therefore, to bear in mind that system and regularity in your work are all-important."

The remaining portions of Dr. Murray's address were chiefly directed to detailed advice in reading, in attending lectures, and in clinical work—in the last of which he pointed out that our metropolitan system is deficient. He earnestly urged upon students the desirability of going abroad for a time, and extending their term of student-work beyond that required by the licensing corporations, and advised them to obtain the highest qualifications possible; and alluded to the shameful state of ignorance in which some young men commence practice, possessed though they be of one or more British qualifications.

The lecturer concluded his address by reminding them that beneficence formed medicine's highest title to respect; that their duty, their real pleasure, would be found in allaying misery, in assuaging suffering, and advancing the physical well-being of man. He pointed out that *succurrere miseris* was the first lesson of their profession; and in carrying out their great and noble object they should follow it as best they could.

ST. THOMAS'S HOSPITAL.

MR. LE GROS CLARK'S INTRODUCTORY LECTURE.

THE lecturer first referred to the removal of the hospital from its former site to its present position, contrasting the two, and paying a well-merited compliment to the treasurer, Sir Francis Hicks, for the untiring energy he has devoted to the completion of this great work, and likewise to the governors for their enlightened appreciation of the importance of making suitable arrangements for a large medical school.

He then gave a brief history of the origin, foundation, and development of the hospital, from the earliest notice of its existence to the present time; and subsequently referred to many circumstances of interest recorded in the chronicles of the establishment.

The names of the various medical officers who have been attached to the hospital, and whose reputation has been handed down to us, were next noticed; and the lecturer especially dwelt on those of Cheselden and Mead, whose busts have been presented to their *Alma Mater* by the "old students."

The sudden death of his late colleague, Mr. Solly, was alluded to by the lecturer, who remarked that they had been associated at the hospital through life; and that he could not recall a single hour during which the harmony of their intercourse had been interrupted.

Having contrasted the existing with the past system of hospital education, the lecturer dwelt at some length on the relative duties and responsibilities of teachers and pupils; and alluded to the deep interest he felt in the proposed arrangement for an amalgamation between the corporate bodies and the universities, with a view to having one common portal by which all candidates may obtain a qualification to practise their profession.

The lecture was concluded by a personal appeal to the students, and the expression of a confident anticipation that the future career of the new hospital and school would prove worthy of its past history and of its existing habitation.

UNIVERSITY COLLEGE.

DR. BASTIAN'S INAUGURAL ADDRESS.

AFTER remarking that "words of advice and counsel had been so often uttered to the new-comers" as to make it almost useless again to take up such a well-worn theme, Dr. Charlton Bastian entered upon the topic of the Nature and Origin of Epidemic and Specific Contagious Diseases. He now took up this subject because, being "deeply impressed with the difficulties surrounding these great problems and with the enormous importance of strengthening the foundations of our knowledge in respect of them," he had been induced more than two years ago to investigate some questions which lay at the root of the whole subject. It seemed to him that no real advance could take place in our knowledge of these diseases until certain other great problems had been settled. What is the real cause of fermentation and putrefaction? Can the organisms which are associated with many of these processes arise *de novo*? These were questions the solution of which seemed of the utmost importance to the science of medicine as well as to the cause of science generally.

After reviewing the mode of origin and distribution of such morbid products as cancer and tubercle, Dr. Bastian proceeded to show that the knowledge which we have acquired concerning them is capable of throwing much light upon the history of general so-called "specific" affections and their mode of distribution through communities, or from individual to individual. "Can cancer or tubercle arise in the individual without any pre-existing hereditary taint? Can the states of blood peculiar to the several specific affections arise *de novo* or independently of contagion? These are questions whose import is really similar."

The lecturer then traced the origin of "the Germ Theory of Disease," showing, on the one hand, how it was principally based on doctrines relating to the cause of fermentation; and, on the other, how much all existing evidence was opposed to its truth except in reference to certain general parasitic diseases in which minute organisms were known to pervade all the tissues of the body. These parasitic diseases were, however, notably different from the specific fever and very many other contagious diseases to which the "germ theory" had been supposed to apply. The theories of Liebig were then explained in reference to the zymotic diseases, and the action of their poisons was contrasted with those of other better known organic poisons. An attempt was made to show how the gulf might be bridged which at present appears to separate the effects of snake-poison from those of hydrophobia and other contagious affections in which the virus is reproduced within the body.

After having alluded to the evidence which we possess concerning the "spontaneous" origin of very many of these maladies, the lecturer said:—"Now the remaining members of the group of specific infective diseases are varicella, whooping-cough, measles, scarlet fever, and small-pox. The knowledge which we possess concerning the mode of origin of these otherwise than by infection is almost *nil*. They differ amongst themselves, it is true, as regards their degree of infectiousness; but, as others have suggested, they are probably more strictly dependent upon individual states than upon external conditions, and, consequently, are more baffling to those who attempt to fathom their causes. Measles, scarlet fever, and small-pox are undoubtedly the most contagious of diseases, and therefore are the chances always strongly in favour of their contagious origin in any given case. But should this satisfy us? Should we be content to say that even measles, scarlet fever, and small-pox are propagable only by means of contagion, and cannot arise *de novo*? Are they not strictly comparable with many other general infectious diseases, which undoubtedly arise 'spontaneously'? Do we not see amongst those which may so arise, that the degree of contagiousness is altogether variable? Does not this seem gradually to increase in each affection, as the off-cast particles have tendencies to undergo molecular change which are more capable of initiating chemical actions of a spreading character in the blood or mucous surfaces of ordinary individuals? And does not the diminishing contagiousness of different diseases seem to be due to the fact that off-cast particles are less and less capable of acting upon the healthy fluids and mucous surfaces of the body, but require that these should be altered, now by one set of agencies affecting the general health, and now by another, before such particles can initiate those changes which lead to the evolution of one or other of the specific poisons within the body? Whooping-cough, measles, scarlet fever, and small-pox would in this case be merely the last terms of a series, differing from the other members simply in degree, but not in kind, and therefore as capable of being generated *de novo* as either of the others, although much more capable than they are of being disseminated by means of contagion."

Dr. Bastian said: "Let us not be blinded, however by

any narrow or exclusive theories which would teach us that epidemic and infective diseases cannot arise *de novo*. Let us, instructed by a broader survey of the facts, assign no such limits to natural possibilities, and not lightly accept theories which lead to supineness when we ought to be stimulated to exertion. Whilst accepting to the full all doctrines which inculcate the necessity of diminishing the chances of contagion by every available means, let us, full of hope, diligently seek also for the causes which engender even the most contagious of diseases. Prevention of disease is *the* grand end and aim of medicine; if, then, we have learned from the sad lesson of experience that scarlet fever and small-pox are virulently contagious diseases; if, even in ninety-nine cases out of a hundred, or even in a still larger ratio, either of these diseases is acquired by contagion, then is it all the more important that we should strive to ascertain what are the invariable and immediately antecedent sets of conditions or states of system which suffice actually to engender these maladies. In such cases knowledge and power are most frequently convertible terms. Next to typhus fever, the most fatal of the infective diseases which occur in this country are scarlet fever, small-pox, measles, and whooping-cough. The ravages of typhus in our crowded cities and in our gaols have been enormously curtailed, not so much because of its diminished spread by contagion, but rather because we have learned what are the causes which engender it, and are therefore better able to prevent its occurrence. Let us strive, then, to acquire a similar knowledge concerning scarlet fever, small-pox, measles, whooping-cough, and other contagious diseases, and so endeavour in the most efficient manner possible to check the ravages of these *morbi populares*.

"Time will not permit me even to allude to the many other interesting and important problems which still remain to be solved in reference to these diseases. What I have said, however, will, I hope, suffice to inspire you with a sense of the great difficulty of the problems which you will subsequently have to face, and therefore to make you feel the urgent need for diligent, patient, and honest work all through your career, without which you will not be able conscientiously to accept the high responsibilities which will subsequently devolve upon you as practitioners of medicine, and without which no real advance in knowledge can ever be made."

WESTMINSTER HOSPITAL.

INTRODUCTORY ADDRESS BY DR. BASHAM.

DR. BASHAM commenced by observing that it might be to the advantage of those now entering the profession to have placed before them the relative position assigned to medicine and surgery among the other arts and sciences. These words were so constantly employed almost as convertible terms that it was expedient to give such a definition as would enable the student to understand clearly the position held by medicine among other branches of human inquiry. The word "science" comprehended investigations into the powers and properties of matter, inorganic as well as organic; the mutual action of forces and masses; the laws of matter, statical and dynamical. The term "art" was applied to everything which was the product of the mental or manual skill of the individual.

Science, properly so called, was either deductive or inductive. The first comprised the exact sciences, mathematics. The second (inductive) included the natural sciences, or physics; and the object of these was a knowledge of the laws of the material world.

The natural sciences were then classified, and the necessity for a knowledge of them to the student and practitioner of medicine was insisted on. It was shown that all these branches of knowledge rested on correct and trained observation. The arts were then enumerated. They severally included whatever was effected or produced by the mental conception, or the manual skill, or both, of individual minds. Art produced combinations or effects which could not happen or exist except through the conceptions of individual intelligence. The highest efforts or products of art might be accomplished without any specific knowledge of natural science; but when art was aided by natural science the result was greater perfection. But if science was not absolutely necessary to the existence of art, how different was it with the practice of medicine. There was not one of the natural sciences some knowledge of which was not imperatively required in medicine. The aim and scope of medicine as an art were shown to be the preservation of the body in health, and the freeing it from those evils and disorders which neglect of the laws which govern and minister to life most surely entailed. These could only be accomplished by a thorough knowledge of the nature and force of those laws. The first essential was a minute and searching knowledge of structure both human and comparative; the second a knowledge of the functions of the several organs. On a thorough knowledge of anatomy and physiology the whole fabric of medicine rested. It was shown that the vital forces were examples of the economy of the natural laws of the material world. Not only did these vital forces work in accordance with the physical laws, but they were evolved in strict obedience to and dependence on those laws. The functions of the heart and of the lungs, the action of the muscles, the structure of the eye and of the ear, were illustrations of the adaptability of structure and function to the laws of the material world. The position of medicine up to this point was that of a science strictly inductive.

The causes of disturbed function were then glanced at; a definition of health was offered as a starting point of comparison with the earliest manifestations of deranged or diseased structure or function. The scope of general pathology was then mentioned as consisting of an inquiry into all the conditions, causes, symptoms, and results of disordered health, whether among individuals or among the mass. Allusion was made to epidemics. Medicine as an art had, from its earliest records, recognised the prevalence at times of particular types of disease. To trace the origin, the mode of propagation, and the means of restraining epidemic forms of disease was recognised as one of the most important duties of the profession. Although little success had yet attended efforts to arrest such epidemics as cholera or scarlet fever, yet over one fearful scourge the genius of Jenner had triumphed, and victory complete and undoubted had been the result of the contest between vaccination and small-pox. There could be no higher aim for any science than to stamp out the causes which favour the propagation of disease, of whatever kind, among the community. To investigate the causes of the unhealthiness of any given locality, to trace the development of disease to the co-operation of vice and ignorance, to propose means for the sanitary welfare of large and populous places, was the paramount duty of the profession. But to accomplish this required a mind specially trained—one accustomed to exact and patient observation, skilled in all the collateral branches of medicine: a chemist—a physiological one—conversant with the morbid agencies of air defective in purity, with its sources of contamination, with the influence of soil and drainage on animal health, with the qualities of water and its impurities. Some knowledge of constructive art should also be added. The influence of particular kinds of labour on health, and the several diseases peculiar to special trades and occupations, also needed attention. To perform these duties required a high-class medical education, to which should be added sound judgment and tact in dealing with the prejudice and ignorance of people, and a power to persuade by reasoning rather than of dictating by authority.

After some remarks on the limited means of generalising on the action of remedies, and establishing any definite law as to the certainty and exactitude of their action, moral probability, or, at most, moral certainty, being all that could be arrived at, the lecturer proceeded to sum up the attributes of medicine both as a science and an art. It was a science in relation to the means and sources whence it was derived, for it was built up of many, if not all, the other natural sciences. It was an art, however, in its exercise, and its value was proportioned to the scientific training, the tact, and judgment of the individual practising it. It was an art which for extent and variety of knowledge possessed by its more distinguished members was not exceeded, scarcely equalled, by any. Its utility was universal, for it was with advantage and benefit exercised in every region of the world, alike useful to all nations, peoples, and creeds. Medicine was the science of observation applied to the investigation of everything which related to the health of man, individually or socially. It was based on a

thorough knowledge of the structure of man, and of the chief families of the animal and vegetable world, to which must be added a knowledge of the laws pertaining to matter and force. The need for such wide and extended information had been fully shown of late years by the altered course of study now recognised by the London University as necessary for the preliminary degree of Bachelor of Medicine. To be educated in such an art brought to the possessor all the advantages and grace of an enlightened education. It trained the mind to understand the laws regulating the evolution of the germ out of which his organisation sprang. It taught him the conditions governing nutrition, regulating development, or ministering to decay, the premature tendency to which it was the effort of the art to avert. As an art it dealt in no dogmas; it regarded as reliable and true only that which was susceptible of demonstration and proof. It sought no converts, for the essence of its teaching was that its followers must be ever students; for the words of Harvey were ardently accepted by all workers, "that all we know is infinitely less than all that remains still to be known." In this art there was no fealty sworn to authority, and only that which was ancient was loved which experience or science had proved to be true. The sciences on which this art rested could not be learnt from books alone. The fabric of nature and the material world must be searched and studied, and each step the student made must be steadily from one demonstrated fact to another. The theories of incomplete observation were constantly tested by more numerous and reliable facts, and which scientific experiment eventually verified or ignored.

Thus gathering within herself the tributary streams of many branches of natural science, each contributing some truth or fact applicable to the interpretation of the laws of health and disease, medicine might consistently take her place among the arts and sciences, and claim a prominent position among the most useful and beneficent of those scientific pursuits to which the intellect of man might be devoted.

ON SOME PHYSIOLOGICAL ERRORS CONNECTED WITH CHOLERA.

BY WILLIAM SEDGWICK, M.R.C.S., &c.

IN one of Dr. Geo. Johnson's late publications on the subject, it is assumed that cholera is due to a material poison, which "is absorbed and enters the blood." Having entered the blood, the poison is then assumed to have a twofold effect: in the first place, it is said to produce an arrest of the pulmonary function; and, secondly, to produce a gastro-intestinal flux. All the phenomena of cholera are supposed to be due to this specific blood-poison, which, by its effect on the lungs, produces a state of collapse which has been considered similar to that "which accompanies a fit of spasmodic asthma," and, by its effect on the alimentary canal, produces a flux, which, as "the result of a conservative effort to expel the poison and its products from the system," is said to be "analogous to the eruption of small-pox." If, consequently, with the author of this theory, we admit that cholera is due to a blood-poison, we have then to encounter the physiological difficulty of the twofold action assigned to it, and be prepared to assume that this specific blood-poison can, by its effect on the muscular coat of the minute pulmonary arteries, cause them to contract, so as to arrest the pulmonary function; and that it can, at the same time, by its effect on the muscular coat of the minute arteries of the alimentary canal, cause them to dilate, so as to produce a flux. Now, as the local condition of the vascular system immediately preceding the occurrence of a flux is well known, it is obvious that the so-called "stop-cock action" of a blood-poison on the vessels of the lungs must be inconsistent with the simultaneously contrary effect of the same poison on the vessels of the alimentary canal; and, accordingly, it has been found that such is the case. For there is absolutely nothing in the condition of a patient suffering from cholera analogous to that of a patient suffering from "a fit of spasmodic asthma"; and the unimpeachable testimony of successive clinical observers, from the earliest period in the history of cholera down to the present date, sufficiently disproves this assumed "stop-cock action" of an assumed blood-poison on the pulmonary circulation. It has indeed for many years been satisfactorily established that where there is no previous lesion of the lungs, percussion and auscultation reveal no pulmonary disorder in cholera. "Percussion of the chest," as M. Desnos in his lately-written and valuable article on Cholera informs us, "furnishes a normal or even an exaggerated resonance; and the vesicular murmur, far from being weakened, is heard in all its purity." Whilst the effect of cholera on the respiration in cases of pulmonary disease is opposed, even still more completely, to this theory of "a stop-cock action," and to the consequent attempt of Dr. Johnson to establish an analogy between cholera and asthma; for, according to MM. Briquet and Mignot (whose evidence, essentially agreeing with that of other observers, may be selected for the occasion), the dyspnœa was observed to be invariably diminished in all their phthisical patients attacked with cholera, and at the same time the expectoration almost, if not altogether, ceased. The chemistry of respiration in cholera, which was very carefully studied during the epidemics of 1849, 1854, and 1866, is alike opposed to this theory of the "stop-cock action" of a blood-poison on the pulmonary circulation; for the diminution of the numerical relation which subsists between the amount of carbonic acid and of oxygen in cholera respiration, and which leads to pulmonary collapse, is, as I have long since stated in my work "On the Nature of Cholera as a Guide to Treatment," simply an indication of the extent to which the organic functions of other parts are affected: *the arrested formation of carbonic acid in the system having the same relation to pulmonary collapse as the arrested formation of urea has to suppression of urine.*

The assumed antagonism in the action of an assumed blood-poison on analogous structures, leading to defective oxygenation of the blood in the lungs and to increased secretion in the alimentary canal, is not only unsupported by any satisfactory evidence in its favour, derived either from clinical observation or from chemical research, but it is, moreover, opposed to the observations of experimental physiologists. There is, it is true, an antagonism of action manifested in the effect produced by sympathetic or vaso-motor nerve-section, which may simulate the effect produced by poison or disease; and it will be useful to refer to this fact in connexion with some of the occasional phenomena of cholera. But whenever such antagonism is displayed in the results of the same morbid agency, the structures involved are essentially unlike; and a very brief consideration of one of these phenomena in cholera will serve still further to show the fallacy of the physiological assumptions on which the theory proposed by Dr. Johnson rests.

Among the phenomena which are thus occasionally associated with cholera is the continuance of the mammary secretion during collapse, on which great stress has been laid, and which has been very confidently cited both by Dr. Johnson and by Sir Thomas Watson as capable of affording evidence in support of the theory that the disease is essentially due to defective oxygenation of the blood, consequent on contraction of the minute pulmonary arteries from the presence of a specific blood-poison. Dr. Johnson informs us that "in a nursing mother who is the subject of cholera and collapse the secretion of milk continues, because the milk constituents—casein, sugar, oil, and water—are not oxidised products." And, in like manner, Sir Thomas Watson, in the newly revised edition of his lecture on the disease, having urged in favour of this theory of defective oxygenation of the blood in cholera that the suppression of bile and urine during collapse is due to their chief constituents being all results of oxidation, proceeds to assure us that this "is rendered all the more probable by the curious fact that, when a nursing mother becomes the subject of cholera and falls into collapse, the secretion of milk continues unchecked. Now the chief constituents of milk—casein, sugar, oil, and water—may be derived from the blood without the addition of oxygen. They are *not* the products of oxygenation." The fallacy of this argument was fully exposed in the *British Medical Journal* of Sept. 19th, 1868, where it was shown that "the occurrence during cholera of the mammary secretion is in no respect exceptional; for, as regards the reproductive functions generally, there is satisfactory evidence to prove that menstruation may,

like the mammary secretion, occur during the algide stage of the disease, without being either delayed, diminished, or checked; that the liability to abortion is, for the most part, limited to the early periods of pregnancy, and that the blood lost on such occasions is not unfrequently florid; and that towards the full term of pregnancy, not only does the liability to abortion usually disappear, but the life of the fœtus may be fully maintained during a prolonged algide stage of cholera, and even after the life of the mother has apparently ceased." As the literature which has been for some years steadily accumulating on this subject seems, however, to have been in some quarters quietly ignored, it may be useful to give a short summary of what has been suggested and observed respecting the continuance of the mammary secretion during collapse.

Three theories, which may be described as the anatomical, the chemical, and the physiological, have been on different occasions advanced to account for this phenomenon. The first of these theories, which was suggested by the celebrated Magendie, refers it to the nearness of the mammary arteries to the centre of the circulation. The second theory, which has been proposed by Dr. Johnson, and accepted by Sir Thomas Watson, refers it to the chemical composition of the mammary secretion, which is said to differ essentially from other secretions (bile and urine) which are suppressed, in the fact that oxygen is needed for the latter, but not for the former, of these secretions. Whilst in the third theory, which has been suggested by myself, it is proposed to account for it by the antagonism which naturally prevails between nutrition and reproduction, and which would allow of the continuance of functions associated with reproduction even when, as in the collapse of cholera, there is a central arrest of nutrition. The evidence in support of this theory, which is contained in my paper "On the Continuance of the Mammary Secretion when the Urine is suppressed in Choleraic Collapse," and which has never been refuted, proves that the mammary secretion is simply one in common with other phenomena, either primarily or secondarily associated with the reproductive organs, which are unaffected by cholera. In addition to the evidence, chiefly clinical, which was adduced on that occasion in support of this physiological theory of the continuance of the mammary secretion during collapse, there is, as might be expected by anyone whose attention has been directed to the progress made in such inquiries during the last few years, evidence of another kind, derived from experimental physiology, which satisfactorily confirms the explanation which I have given of this phenomenon in cholera. For, as I have lately had occasion to state in my paper "On Choleraic Glycosuria," it has been experimentally demonstrated by M. Legros (*Gazette Médicale de Paris*, 1866, p. 104) that paralysis of the branches of the sympathetic nerve distributed to erectile tissues, not only of the reproductive organs themselves, but also of the secondary sexual structures, instead of causing turgescence, produces a less active determination of blood to the part, so that immediately after extirpation of the superior cervical ganglion, for example, in cocks and turkeys, the erectile tissue of the head on the operated side becomes pale and collapsed.

It may be interesting to state that an unsuccessful attempt, analogous to that of Dr. Johnson, to account for the occurrence of one of these occasional phenomena in cholera by a chemical theory, was made some years since by M. Becquerel, who proposed to explain the fact that encysted dropsy of the ovary suffered no diminution during an attack of cholera which was attended by abundant evacuations by referring it to the presence of insoluble cholesterine in encysted dropsies, from which the liquid in true dropsies is free.

The history of cholera furnishes many examples of admitted mistakes in theory and in practice. Even Sir Thos. Watson himself has thought it advisable, in the later editions of his lecture on this disease, to give up the theory of vicarious secretion; although, for many years previously, he had proposed to explain the absence of uræmic poisoning in cases of prolonged suppression of urine in cholera, by assuming that the urea "is drained off from the blood in the enormous and unnatural flux from the stomach and bowels" (vol. ii. 1848, 3rd edit., p. 595). For this theory of vicarious secretion had necessarily become untenable when, in addition to the important chemical fact that there was as a rule no urea present in the rice-water flux, it was moreover satisfactorily demonstrated that suppression of urine usually occurred, without being followed by uræmic poisoning, in cases of excessive gastro-intestinal irritation. And as the well-directed investigations of many scientific inquirers have now succeeded in dispersing much of the mist of unfounded assumption which has hitherto obscured the disease, it cannot be considered unreasonable for us to hope that Dr. Johnson will soon be induced to follow the good example of Sir Thomas Watson, and, in like manner, give up a theory which has always been regarded as physiologically weak, and which has lately been deprived of the highly valued though indirect support which it was erroneously supposed to receive from the continuance of the mammary secretion in suckling women during collapse.

Park-place, Upper Baker-street, Sept. 1871.

ON EXCISION OF THE KNEE-JOINT AND THE CONDITION OF REST NECESSARY TO BE MAINTAINED.

BY WM. KNIGHT TREVES, F.R.C.S. EXAM.,
SURGEON TO THE NATIONAL HOSPITAL FOR SCROFULA.

(*Concluded from page 464.*)

IN published reports of cases it should particularly be mentioned at what date the splint was first removed or changed. From observation and inquiry I am inclined to believe that, in a considerable proportion of cases of excision, the splint is changed within or about three weeks from the operation, on account of soiling of the splint. If this be true, we cannot be surprised if excisions often do not turn out satisfactorily. At the end of three weeks repair is taking place, but union can scarcely be said to have commenced; yet often at this time, if not earlier, the bones are moved, and a certain amount of inflammatory action is not unfrequently set up.

These dangers, then, have to be guarded against by—

1st. Taking the necessary precautions at the time of operation to ensure perfect rest, and to provide against any soiling of the apparatus or shifting of the sawn surfaces, either of which would entail moving the limb before the cure is complete, and danger to the limb.

2nd. Supposing every precaution to be taken at the time of operation, it will be necessary afterwards to guard against any movement which might be caused by changing of bandages, dressings, or splint by the dresser; and, what is still more essential, nurses must not be allowed to shift sheets, or in any way disturb the patient, except under the personal supervision of the dresser or house-surgeon.

Important among the precautionary measures to be taken to prevent movement is careful padding of the splint. This duty is usually left to nurses, and very often indifferently executed by them. The splint must afford firm, even support; therefore nothing soft, of the nature of cotton-wool or tow, should be used. The best plan is to take an old blanket and cut it into shapes the size of the thigh and leg pieces of the splint. Then take as many pieces as may be necessary to afford the desired thickness, have them quilted firmly together and covered with linen, and then strained tightly to the splint so as to fit its hollows. In padding the splint it is well to bear in mind what we have to guard against. Thus the pad should be thicker under the head of the tibia than under the thigh or further down the leg, and this is better provided for by quilting in extra layers of blanket in this part than by pushing in a pad at the time of operation or other makeshift contrivance. We must also provide in the padding for a full drop of the heel, which will not bear any permanent pressure. By putting additional padding under the head of the tibia, and allowing the heel to drop, we entirely avoid what is the most common displacement after the operation—namely, slipping of the tibia backwards behind the femur, or, what is in effect much the same thing, displacement of the femur forwards over the tibia. Over the narrow part of the splint it is best to use a movable pad of the same character as the fixed portion and covered with zinc dressing, so that, if unfor-

tunately it should become soiled, another could be sewn to it and drawn under without disturbing the limb. In bandaging the limb to the splint it is well to bear in mind that it is not a matter of indifference whether the bandage be applied in one uniform manner—viz., from left to right or from right to left, as the dresser may be disposed; on the contrary, a bandage applied, say, from right to left presses more particularly in that direction, especially at the moment of application, so that it is possible the bones may be slightly disturbed in their relation to each other during the bandaging. Recollecting the tendency of the femur to rotate outwards in excision, we shall do well to bandage over this bone from without inwards; while over the tibia it is better to bandage from within outwards.

The apparatus to be applied depends of course on the individual preference of each operator. I am inclined to think that, for adults, Fergusson's excision splint, with an extension piece longer than usual and reaching to the axilla,* answers very well. There are objections to this splint, such as its weight and the fixed position it entails on the patient; but it has this advantage—viz., that in case there should be any tendency to displacement, the surgeon can exercise a good deal of control over the relation of the two bones to each other without disturbing the limb. The measures I have adopted in using this splint are the following:—

1st. To fix it well at the axilla by a band made precisely like an ordinary perineal band. This is passed over the front of the opposite shoulder, then behind the back, and tied to the top of the extension piece, thus keeping the latter firmly fixed to the armpit.

2nd. To secure it by a wider band, which, being strapped firmly round the hips, steadies the apparatus at this point, and prevents jarring in the case of any attempted movement of the buttocks.

3rd. Having the limb swung sufficiently to clear the bed, I have affixed a weight working over a pulley to the foot-piece heavy enough to counteract the pressure of the splint towards the hip. Moreover, if the knee be painful from the bones being pressed together by contraction of the muscles, the weight may be increased and made to exercise as much extension as may be necessary to overcome such contraction and consequent pain; to do this, loosen the thigh bandage, and put on as much weight as may be required to afford ease.

4th. There is occasionally after the operation some starting and jumping of the muscles of the thigh. This is usually relieved by a nurse keeping her hand gently on the thigh; but what is more effectual for the purpose is an oblong bag of sand,—the length of the bag and the quantity of sand in it being so arranged that when the bag is applied over the thigh the material of the bag lies smoothly on the front of the limb, while the sand, distributed as required at both ends of the bag, forms a steady weight on each side, which, although allowed to rest almost entirely on the bed and keeping but slight pressure on the thigh, is yet ready to act if there should be any starting of the muscles in sleep or otherwise.

Lastly. What is more important than any other measure is to have a proper bed, so that the patient can use the bed-pan and have draw-sheets changed without the slightest movement. I can recommend a mattress which effects this object, and which is perfect in its action, inexpensive as an ordinary one, and of the simplest possible description. It consists of two half mattresses firmly stuffed with horsehair and of good thickness. These two halves have a definite space between them, as regulated by the piece of tick connecting them underneath. This space is exactly filled by a rectangular air-cushion, which is made to occupy the gap between the two half mattresses. This cushion, when the mattress is in use, is kept firmly distended with air, and of course is under the patient's buttocks. When the patient requires the bed-pan, it is only necessary to let the air out of the cushion. The patient lying on his back on the two firm half mattresses, the buttocks do not sink when the air is let out, but form a bridge over the gap; into this the bed-pan is introduced without the slightest movement being required on the part of the patient. On removal of the pan, the cushion is blown out again in about a minute by the small bellows for the purpose. I have found this bed invaluable, not only for excision of the knee-joint, but also in cases of acute hip disease, excision of hip—in fact, whenever perfect rest is required and the use of the bed-pan causes pain. It is moreover just as easy to change draw-sheets with this mattress. I cannot myself lay claim to this simple invention: it was first thought of by a patient suffering from acute hip disease, whose wits, sharpened by his sufferings, led him to the idea. I have shown it to a few surgeons, but have not until now brought it generally before the profession.

Thus Fergusson's excision-splint, with some modification, affords a very good means of securing the limb after excision in the case of adults. But for children it certainly is not suitable; for these we require something lighter, more movable, and not necessitating that strict restraint from movements which Fergusson's splint entails.

I believe the following will be found the best apparatus for children. It is light, entirely prevents any movement between the sawn ends, and admits of some little twisting about on the part of the child without injury to the limb. In preparing and applying this apparatus I have been much indebted to the ingenuity and skill of my friend Mr. Clouting, resident surgeon to the hospital.

The splint consists of leather strengthened at the back by a piece of iron about two inches wide, which is riveted to the leather. To prepare it, cut a piece of leather stout in proportion to the age and size of the patient, in length from just above the heel to within two inches of the fold of the knee-joint, wide enough to surround two-thirds of the leg, and properly shaped. Prepare another piece to extend from about two inches above the joint to the tuberosity of the ischium, and long enough to reach on the outside and front as high as the crest of the ilium. The two pieces of leather are connected by the piece of metal of the width I have stated, a space of about four inches (but varying according to the size of the patient) being left between them. The piece of metal passes the length of the splint to within about half an inch of either extremity; it is hollowed slightly to correspond to the curve of the leather, to which it is riveted along its whole length by two rows of rivets. Before the operation, the leather, with the metal attached, is soaked in water and thoroughly softened, chamois leather is pasted to its inner surface, and the whole made ready. Immediately after the operation the splint is applied to the limb and fixed by gum bandages, which commence at the foot and terminate by a figure of eight round the pelvis. Great care is taken that the blood does not get into the splint; and the limb is laid in a M'Intire for twenty-four hours, to keep the foot straight and in good position while the gum hardens. The limb is then swung; the apparatus, being light and firmly fixed to the trunk, readily follows any movement of the patient without jar. The patient requires no other support until union has taken place and he is able to walk. I have lately found this splint very useful in the case of a woman, and prefer it in most instances to any other, but it is for children that it is especially valuable. The chief care required is in applying the gum bandage so as to afford the proper amount of support without running the risk of causing subsequent pain to the patient, and necessitating change in the apparatus from its being too tight.

One point remains which influences the result of excision of the knee-joint, and that is the sanitary conditions under which the patient is placed. It appears tolerably certain that a patient about to undergo the operation of excision of the knee-joint, entailing at the best a somewhat lengthened convalescence, is not having the best thing done for him when he is advised to submit to the performance of the operation in a crowded city, or, worse still, in a large city hospital. The fact that the disease for which the operation is recommended often has its origin in constitutional causes, and that the successful progress of the union between the bones depends so much on the maintenance or recovery of the general health, renders it scarcely fair to the patient with joint disease to excise under such unfavourable circumstances. The patient should be removed out of town to the country, or, still better, to the seaside, before he undergoes any such operation. For the poor, the large hos-

* I have lately seen, in one of the Half-yearly Retrospects, an abstract of a paper by Mr. Gant, in which he recommends that the extension-piece should be made to reach the axilla. The advantages accruing from this alteration are so obvious that the same idea will probably have occurred to more than one surgeon. I have used the long extension-piece since the beginning of 1868, and there are now in the hospital here some splints with this adjunct, which I had made in that year whilst resident surgeon to the hospital.

pitals ought to have branch establishments at the seaside, to which they might send cases of this kind. Failing this, I humbly submit that it is better to use an institution such as the hospital here for the purpose.

Margate, August, 1871.

Reviews and Notices of Books.

An Introduction to Pathology and Morbid Anatomy. By T. HENRY GREEN, M.D. Lond., M.R.C.P., Lecturer on Pathology and Morbid Anatomy at Charing-cross Hospital Medical School, and Senior Assistant-physician to Charing-cross Hospital. London: Henry Renshaw. 1871.

WE have been very much pleased by our perusal of this little volume. It is the only one of the kind with which we are acquainted, and practitioners as well as students will find it a very useful guide; for the information is up to the day, well and compactly arranged without being at all scanty. The author is not only well-read in the literature, English and foreign, of his subject, but he has compared the views advanced by other writers with the results of his own experience as a student and teacher in the post-mortem room, so that his materials have had the benefit of the sifting process to which they have been subjected. Considering the rapid and important advances that pathology has made during the last few years—owing to the researches of German investigators in particular,—our knowledge of the development of new formations, inflammation, and tuberculosis, is still far from being complete, and we may well believe our author when he states that he has experienced considerable difficulty in the composition of the work. It is said that he is the best general who makes the fewest mistakes; and, judged by a similar standard, we think Dr. Green has succeeded uncommonly well. The book is admirably illustrated by woodcuts, most of which have been taken from Rindfleisch and other authors, but many are original.

The first part of the work is devoted exclusively to the consideration of morbid processes which are characterised mainly by alterations in nutrition; the second, to those in which an altered nutrition is associated with change in the blood and circulation, constituting inflammation; and the third to changes in the blood and circulation alone.

In speaking of the "cell," the author says that whatever be the part played by the nucleus, there can be no doubt that the protoplasm is the most important factor of the cell, and it may itself be the only constituent; and he proceeds to illustrate this position. The proposition of Virchow on the genesis of cells—that every cell originates directly from some pre-existing cell—is held to form the basis of the pathology of the present day. In Chapter II., on Arrested Nutrition, Dr. Green, in speaking of rigor mortis, alludes to the explanation offered by Kühne and others, that it is really owing to the presence and coagulation, in the substance of muscle, of a firm albuminoid compound (myosin), which is separated from the fluid when the nutrition of the muscle has ceased. We pass over the chapters on atrophy, on the fatty and some other forms of degeneration, and come to Chapter VII., on Amyloid Degeneration, of which a full and good account is given, accompanied by many judicious comments and practical observations. The classification of the new formations adopted by the author is that based on their histological characters, and arranged in accordance with the classification of the physiological tissues. The chapters on "Tubercle and the Carcinomata" appear to be carefully and judiciously done.

The labours of Virchow, Cohnheim, Stricker, Burdon-Sanderson, Lister, Ryneck, and others are fully referred to in the pages devoted to the consideration of Inflammation. "Pus-corpuscles, like white blood-corpuscles, lymph-corpuscles, and many other young cell forms—all of which are included under the common term of leucocytes—are masses of contractile protoplasm. They possess the power of spontaneous movement, and may undergo continuous alterations in form, or migrate in the tissues. They may also multiply by division." Without discussing the theories that have been advanced by different pathologists, the author considers that it must be admitted there are two sources from which the pus-corpuscle may be derived: one from the blood, the other from the inflamed tissues. There can be no doubt, moreover, that the former is their principal source, and that they are in the main migrated blood-corpuscles. In the earlier stages, Dr. Green says, they are mostly, if not all, emigrants; in the latter they are also derived from the cells of the inflamed tissue. The phenomena and consequences of inflammation of bone, of the heart and blood-vessels, of lymphatic structures in typhoid fever, the mucous and serous membranes, and of the different organs of the body are succinctly, but satisfactorily described; and those belonging to thrombosis and embolism are also clearly set forth in the concluding pages. The work deserves to become a popular little hand-book on pathology and morbid anatomy. A small volume of the kind was much wanted.

The Antiseptic System: a Treatise on Carbolic Acid and its Compounds. By ARTHUR ERNEST SANSOM, M.D. London: Henry Gillman. 1871.

THE first three chapters of this work are devoted to the history and chemistry of carbolic acid, which we may pass over. Chapter IV. opens with the statement that "the chief value of carbolic acid and the compounds associated with it—a property recognised in the past as well as the present—is that which pertains to it as an antiseptic, or an agent preventing putrefactive change." Turning over the leaf, we meet with some details of the author's experiments on the relative quantities of different reagents required to stop the fermentation of 25 grains of sugar. For this purpose 0·03 grain of corrosive sublimate, 0·1 grain of hydrated sulphuric acid, and 2 grains of carbolic acid, are required: showing that to do the same amount of work, 3 parts of corrosive sublimate are equivalent to 200 parts of carbolic acid. The author also gives experiments showing that mixture with alcohol or olive oil much weakens the action of carbolic acid. He remarks, in addition, that carbolic acid does not influence the conversion of starch into dextrine, nor the formation of essential oil of almonds.

Chapter V. begins: "It must be acknowledged that carbolic acid has great power in arresting and preventing both fermentation and putrefaction." Presently follows a table of the quantity of various substances in aqueous solution required to kill, in a given time, spermatozoa, infusoria, and entomostraca. The table contains a list of nineteen substances arranged in the order of their activity, the last on the list being common salt, and the fifteenth being carbolic acid. Higher than carbolic acid stand the common mineral acids, and even acetic acid. Now, accepting our author's opening statement and his experiments, we can hardly avoid asking, Should not sulphuric acid, which is more powerful to arrest fermentation and to kill low forms of animal life, be a better agent than carbolic acid for carrying out the antiseptic system of medical and surgical treatment?

Chapter VI. treats of theories concerning the nature of Putrefaction; and the discussion of Spontaneous Generation and kindred subjects proceeds to the end of Chapter XII. Practical applications of Carbolic Acid as a destroyer of Fungi and Insects come on in the next chapter, wherein may

be read how M. Lemaire saved fifteen thousand Coleoptera in the Museum of Natural History in Paris, and how a dilute solution of carbolic acid, containing one part of that substance in one thousand of solution, will destroy the oidium and the vine as well. In some instances, however, attempts made to carbolise the soil were said to have been successful, and to have arrested the disease and spared the vine. A 1 per cent. solution is recommended to kill ants (less will keep them away); a 5 per cent. solution destroys fleas, bugs, and moths. The preservation of seeds, also of growing crops from the attacks of insects, and the preservation of food, are all to be accomplished by carbolic acid, which is further recommended for use in the dissecting-room, inasmuch as it does not corrode the scalpels. Chapters XIV. and XV. relate to the action of Carbolic Acid on the Sting of Bees and on Vaccine and Cattle-plague Poison. Chapters XVI. to XIX. relate to the Zymotic Theory, Parasitic and Infectious Diseases, and Malaria. Chapter XX. is on Carbolic Acid as a Disinfectant. We read, among other things, that the author considers that the disinfection of clothing by carbolic acid is *much more efficient* than subjection to heat; but, as might be expected, no facts in favour of such an opinion are brought forward. Chapters XXI. to XXV. relate to the external and surgical employment of carbolic acid. Chapter XXVI. is on the absorption of that substance from the surface; the three following chapters treat of its employment by inhalation and internally. Chapter XXX. is on the Antiseptic Treatment of Zymotic Diseases, and the concluding one on the Sulpho-Carbolates. An appendix, nine plates (chiefly microscopic drawings), and an index, close the volume.

WATER-SUPPLY IN INDIA.

WE have had the opportunity of perusing a very able official document, from the pen of Dr. Cunningham, the Sanitary Commissioner with the Government of India, in which he submits to the Secretary of the Government a general review of the Annual Reports of the local Sanitary Commissioners for 1869. It would be impossible to analyse, even briefly, the contents of this document; and we must confine our remarks to one disease which prevailed in India as a vast and terribly destructive epidemic during 1869. We need scarcely add that we allude to the epidemic of cholera, of the history of which, in the Punjab and Central Provinces, we have already had such interesting reports from Dr. De Renzy and Dr. Townsend. As our readers are aware, the opinions of the former are very decided as to the mode in which cholera is spread over a province, and the medium through which it generally attacks a community. Human agency is, Dr. De Renzy holds, indispensable to the first; and as to the second, the most common and influential medium is cholera-tainted water. Dr. Cunningham contends that the theory of the importation of cholera into the different parts of the Punjab is not supported by a sufficient number of facts; and he cites the result of Dr. Ince's inquiry into the epidemic in the Peshawur valley, with the view of showing that the evidence did not prove that the disease was chiefly spread by human agency. Dr. Cunningham disclaims, however, any intention of arguing against the views of those who believe that human intercourse is the only or chief means of spreading the disease. He only pretends to sift the evidence brought forward, and he holds that the influence of human intercourse requires further investigation. He next proceeds to discuss and criticise the views of Dr. De Renzy in regard to the water-propagation theory, originally propounded by Dr. Snow, and advanced by Dr. De Renzy in explanation of the phenomena of the epidemic of 1869 in the Punjab. Dr. Cunningham refers to the facts at Umritsur, Peshawur, and Kohat, with the object of showing that these do not support, or at any rate establish, the views advanced by Dr. De Renzy. We have reason to believe, however, that Dr. Cunningham's statement of facts in regard to the Lahore asylum and the Peshawur valley is susceptible of another and different rendering. As regards Kohat, we have a report on its water-supply by a Government analyst, published in a late number of the *Indian Medical Gazette*, and there cannot be any doubt as to the inferior and impure quality of the potable waters there; and it certainly is a very significant fact that the prisoners in the Kohat gaol, who drew their water, which was relatively pure, from a separate well, should have escaped the explosion of cholera from which the troops at Kohat suffered so severely. The editors of the *Indian Medical Journal* append a note to the report, from which it appears that the prisoners in the Kohat gaol have preserved a similar immunity from four cholera epidemics. We find no fault with the spirit in which Dr. Cunningham's report is written. The same array of facts will not impress all minds in the same way, and a critical, sceptical, deliberative spirit is the right one for a man in his position, provided that it does not lead to dangerous delay or degenerate into mere official obstructiveness or obstinacy. We do not intend to assume an air of superior knowledge, or to dogmatically lay down a creed in regard to the causation of cholera; but we hold with Dr. De Renzy, although not perhaps to the same extent, that human agency and foul drinking water are most influential factors in its development and spread, and that they are, practically, those which we can control by properly directed efforts on our parts. We are thankful that attention has been so thoroughly aroused to these subjects of late that it would be impossible for the Government any longer to delay the prosecution of the most important sanitary labours before them in providing for a purer system of water-supply in India than at present exists there, and we are so far glad to be in accord with Dr. Cunningham. He asserts, by the way, that the action of the Government of India in regard to cholera has never, in the slightest degree, been influenced by any theoretical considerations whatever, and yet that the procedure they prescribe might have been recommended by the most enthusiastic believer in human intercourse and the water theory. It is possible that the procedure may be good so far as it goes without going far enough. That the Government think the reform of the water-supply is of less importance than we do, as a preventive of cholera, is apparent from the fact that such a reform has not, we are assured, been attempted in any one station in the whole Bengal Presidency. Vast sums have been spent in building new barracks, but Peshawur, Mean Meer, and Umballa have been left with a water-supply which is admirably adapted, if there be any truth in the theory, for the dissemination of the cholera virus, and the Sanitary Commission Reports show that such a reform has not been pressed with sufficient force upon the Government. If such had been the case there would have been no necessity for Mr. Macnamara's appeal to an authority in this country. We most cordially agree with that gentleman in thinking that there is great waste of labour, time, and money spent by officials in India in collecting, tabulating, and publishing a quantity of material without sufficient regard to its being relevant to the subject under consideration. We feel, in respect of the enormous reports and dreary pages of figures that come to us from India, very much as did the judge who, whenever he saw the defendant's counsel rising to make a long speech, used to say—"There are such and such things in this case, brother M. or N.; can you meet them"? enumerating those points that went to the root of the matter, but which brother M. or N. desired to avoid touching because he knew they were the weak ones of his case. The Indian Sanitary and Medical Reports too often contain exact and abundant information on matters that we do not care to know, and very little on those we do.

AT the recent graduation at the University of Edinburgh, the Ettles scholarship, which is annually awarded to the most distinguished graduate, was given to Dr. Urban Pritchard, a student of King's College, London. Dr. Pritchard also gained a gold medal for original researches on the structure of the organ of Conti, conducted by him in the physiological laboratory of King's College.

THE LANCET.

LONDON: SATURDAY, OCTOBER 7, 1871.

THE 1st of October has brought to our columns the annual supply of introductory addresses delivered at the various schools of medicine in the metropolis; and these compositions, as usual, will be found to have little in common beyond the name by which they are called. Our readers will perceive that they collectively embrace a very wide range of thought, and even of controversy; and that there is scarcely any topic connected with the profession upon which some one at least of the lecturers has not discoursed. We cannot help thinking that such discursiveness involves a departure from the obvious purposes which such addresses are intended to fulfil; and that it may not be wholly useless to call attention to these purposes, and to consider what would be the chief characteristics of lectures framed in accordance with them.

The introductory address of a medical session is, in the first place, a discourse delivered to a mixed audience, composed of medical practitioners, of medical students, and of the non-medical parents and guardians of students; and beyond this audience, by the agency of the daily press, it is also placed before the general public. It therefore affords, not only an opportunity, but in actual fact the only opportunity, which the leaders of the profession enjoy of speaking *ex cathedrâ* to the non-medical public. It seems to us clear that the proper use of such an opportunity is to explain to the public, and to those young men who are stepping out from among the public to enter the ranks of medicine, what are the true relations of the professors of the art of healing to society, and what are the rights, the privileges, and the duties which these relations impose upon all concerned in maintaining them. The points of friction between medicine and the world are numerous, and the impediments to free motion which they present are greatly increased by asperities depending upon the degree in which each ignores or excludes the point of view of the other. An introductory lecturer might do much to smooth these asperities, to diffuse sound knowledge with regard to the duties and responsibilities of his own calling, and to explain the principles by which the conduct of the physician should be regulated. It is not enough to say that these are the ordinary principles of ethics, because it frequently happens that a superficial view of circumstances would lead to a conclusion from which those who looked below the surface would be compelled to differ. Take, for example, the single case of quackery. The average non-medical citizen would treat quackery at least with indulgence, if not with favour; would be offended at the hostility of physicians towards it; and would be inclined to attribute that hostility chiefly to annoyance at the success of a rival. He would seek to enforce the wisdom of toleration with regard to it; would tell us to do as we would be done by; and would quote "Live and let live," or some saying of kindred meaning, as being proper to clinch his discourse. The physician, on the other hand, who looks upon the quack as a common cheat and dangerous public enemy, and who can no more realise the idea of rivalry with him than the manufacturer who makes watches could realise rivalry with the pickpocket who steals them, knows that this seeming charity and kindliness are altogether misplaced, and that the sayings and proverbs, whether scriptural or politic, have reference to a condition of things totally different from that to which they are applied. We have selected only a single illustration; but a dozen others crowd upon the mind, and nothing but want of space excludes them. As its name implies, the introductory lecture should be a means of introducing the uninitiated to glimpses at least of the inner life of a calling; and the lecturer might either attempt to give a general view of his subject, or might select some single question for more complete and exhaustive consideration. But we hold strongly that he should bear thoroughly in mind the peculiar character of the occasion, that he should not let slip a golden opportunity by discussing subjects that might be more profitably discussed elsewhere, and, above all things, that he should not aim above the heads of his hearers. Those who agree in the views we have advanced will agree also in the opinion that the discourses we print elsewhere, although unquestionably of high intrinsic excellence, are some of them unsuited to the time at which they were delivered, and that they represent no small amount of misplaced labour. Those upon whom the duty of preparing an "introductory" has fallen are apt to complain dismally of the difficulty of finding anything to say which is new. We would beg leave to dissuade them from the search, and would urge that a perennial flow of novelty is neither demanded nor to be desired. The element of novelty is provided by the audience; and the object of the teacher should be to put truths, which are seldom novelties, into clear and attractive forms, and to adorn them with apt and telling illustrations. The best preacher is not he who handles the loftiest themes, or who dogmatises upon the most difficult questions, but he who best enforces the lesson of the day. And when next year shall again bring round the commencement of the medical session, we hope that our introductory lecturers may be induced still further to fall in with the above suggestions. They will have before them youths who are about to enter upon our calling, and parents to whom the future of those youths represents the hope of life. They can in no way employ an hour more usefully than in explaining the peculiarities of the medical calling, in pointing out the snares by which it is beset, and in showing the way to its legitimate rewards. It is a fine thing to be eloquent upon the doubtful and the abstruse; but it is still finer to recognise the work that lies before us, and, having recognised, to do it with our might.

AT the annual meeting, in August last, of the Medico-Psychological Association, the President, Dr. MAUDSLEY, delivered an address, which appears in the new number of the *Journal of Mental Science*. We have more than once ventured to suggest that our English alienists are sorely hampered in their true professional work by the regulations and customs

under which most of them hold public offices, and by the heterogeneous and derogatory tasks that are imposed upon them by magisterial parsimony or ignorance. We have also ventured to point out that the conditions under which asylum superintendents have their being are such as to render it unlikely that they should ever be pioneers in the way of improvement; which, indeed, has usually been the work of men brought into this branch of the profession at a mature age, and not trained up in its customary routine. For these and similar utterances we have more than once been somewhat roughly assailed by adversaries who, fortunately for us, possessed the will to strike effectively in a greater degree than the power, but who were of one mind in the opinion that we had meddled with matters that were too high for us, and that we had laid unhallowed hands upon an ark that only asylum officers should venture to touch. It is therefore with no small pleasure that we read in Dr. MAUDSLEY'S terse and scholarly sentences a series of admissions and suggestions which prove how much truth we had on our side, and which prove also that the most distinguished alienists are still in some doubt about many matters which some of the brethren of the craft would scarcely admit to be at all open to controversy.

Dr. MAUDSLEY divides his Address into three main portions, the first of which deals with the prevention of insanity; the second, with the treatment of insanity in asylums and private houses; and the third, with the use and abuse of sedatives in the treatment of insanity.

With regard to the first of these subjects, it divides itself under two heads; the first having reference to the propagation of insanity from generation to generation, the second to the prevention of the malady in individuals actually predisposed to it. Dr. MAUDSLEY holds that we have no data on which to rest a prohibition of marriage in the case of people suffering from hereditary predisposition. He thinks, indeed, that "great wits to madness are allied"; and that many of the greatest geniuses whom the world has produced have had the taint of some tendency to be insane. Moreover, he does not think the inheritance by any means a certain one; partly because all forms of hereditary disease may remain dormant over an entire generation, and partly because they are not seldom overcome and extinguished in the progress of time. On the subject of the prevention of insanity in an individual who was predisposed to it he speaks of the value of scientifically directed education, and especially of the systematic training of the volition; and explains with much clearness the value of prayer which is itself an expression of the will, as contrasted with prayer which is of the character of the waggoner's invocation of Hercules. On this point, indeed, Dr. MAUDSLEY has been restrained, by limitations of time and space, from enlarging as much as he might have done with advantage. He might, we think, have told his hearers that a man's proclivity to insanity is in direct proportion to the habitual ascendancy of the feelings over the judgment and the will; and that any emotion whatever, if once suffered to become supreme, will exalt the whole of the emotional at the expense of the whole of the volitional elements of character. The man who at once surrenders himself to the governance of evil passions is in a fair way to become insane; but he is hardly less so who, by surrender to emotions not in themselves evil, gradually loses the power of self-control. This is often conspicuously manifested by persons who have cultivated religious feelings, as distinguished from devotion to religious duty. The barren feeling leads to nothing but the supremacy of feeling, as such, over the will, and is at any time liable to be driven out and superseded by any other that circumstances may call into activity. This, indeed, is the reason why so many people are swayed alternately, and in an equal degree, by religious and by sexual emotion; and explains how the cries and groans of a revival or a camp meeting are so often succeeded by the orgies of a Circean revel. There is nothing in which Dr. MAUDSLEY'S writings are more calculated to do good service to humanity than in their tendency to strip off the mask from the often unconscious hypocrisy of sham religion; and to point out what it is, and what are its tendencies and its outcome. Too many persons are restrained by their reverence for the reality from outspoken denunciation of the tinsel imitation, and yet it is through the imitation that virtuous people suffer, and have their truth misinterpreted by its folly. We wish Dr. MAUDSLEY would give to the world a well-considered treatise on education, such as perhaps he alone could write. As we have lately had occasion to say, the science of Psychology has not yet reached a stand-point from which a complete theory of education could be framed; but towards that point the researches of our day are certainly tending, and in time they will hardly fail to attain to it. In the meanwhile we want a book which should serve as a guide and landmark, and which, like the flag of an explorer who lands upon an unknown country, should take possession of it in the names of philosophy and civilisation. It is already quite possible to commence the work of analysing the actions of the mind in various studies and pursuits, and the effect upon its faculties of various habits and accomplishments; and thus to lay the foundation of knowledge which would eventually supersede the rule-of-thumb system in which, for so many generations, we have been content to put our trust.

WE notice with satisfaction that, in many of our hospitals, arrangements are now made for the instruction of students in physical diagnosis by officers specially appointed for the purpose, who have nothing necessarily to do with the treatment of the patients in the wards. In this respect the practice of English hospitals is becoming more and more assimilated to that of the Parisian school, where instruction in diagnosis irrespective of treatment is carried on by the junior officers, to the great benefit of the pupils. Clearly it is far better for the student to be thoroughly "coached" in the meaning of the ordinary sounds of the heart and lungs before he attempts to follow the fine diagnosis and comprehend the treatment of the visiting physician, who has not time to superintend the tyro in his early efforts, or to explain the difficulties which necessarily beset him. The move is one in the right direction; and be the officer in question called assistant-professor, medical tutor, or registrar, he ought to be present in every hospital which has a school attached. At the same time there is a

danger lest treatment should be neglected whilst diagnosis is cultivated; and it is here that the visiting physician must step in, and by his experience and tact convey most weighty lessons to the practitioner of the future. Would it be too much to ask the clinical teachers, both medical and surgical, to exercise their pupils in the suggestion of treatment much in the way they would do were they meeting as practitioners in consultation? We can imagine no better training for future life than a bedside discussion between a steady student and a thorough physician or surgeon on the measures to be adopted in a given case, and the reasons for them. Students and young practitioners would be less at sea in writing a prescription than they often are now, if they were in the habit of writing prescriptions in the wards, to be submitted to the teacher for selection and criticism; and the latter would then be less liable to fall into routine-prescribing—that easily-besetting sin.

A difficulty which we know has been found to interfere with this species of personal training is the diffidence of many young men, and their dislike to expose themselves to the comment of their fellows or the criticism of their teacher. This difficulty might, we believe, be got over by requiring the diagnosis and treatment to be written without any name being attached, on slips of paper which might be used by the teacher as the basis of a much more interesting clinical lecture than is often given. Therapeutics thus taught would necessarily include the art of prescribing; and here we may again urge the necessity for teaching students—many of whom have never served an apprenticeship—the proper methods of combining drugs and of writing prescriptions fit to be sent to an ordinary dispensing chemist. In the out-patient room hospital formulæ may be excusable, and at the bedside it may be convenient to have the dose stated simply on the prescription-paper; but the students should also be exercised in writing six-ounce or eight-ounce mixtures, and should know what vehicle may best be used for the manufacture of a given pill. The days for elaborate Latin directions are gone by; but as it is still customary to write the names of drugs in that language, though ordinarily in abbreviated form, it might be as well for the teacher to dictate occasionally, and for the student to read aloud, a few prescriptions in *full* Latin. If we were ill, we should certainly prefer correct diagnosis and treatment to irreproachable Latinity; but when the last may be acquired with so little trouble, it is a pity that our students should not enjoy this extra accomplishment.

IN face of the acknowledged difficulty in providing hospital accommodation for cholera patients, in the event of an epidemic breaking out in the metropolis, the Local Government Board have done a bold and, we fear, a rash thing in calling upon the managers of the Metropolitan Asylums Board to undertake the duty. There is always danger in changing front in face of an enemy; and one would have thought the Local Government Board had had sufficient experience to make them hesitate in doing anything to relieve local authorities of a duty which so obviously devolves upon them, and in imposing what may be practically a labour of enormous magnitude on a board of managers who, notwithstanding unparalleled and gigantic efforts, have been unable to satisfy the public in the case of small-pox. The managers, happily, are more cautious. They have very properly hesitated to accept the unlimited responsibility of providing for all the cholera patients in the metropolis; and in a fit of despair, resulting from their recent experience, they call upon the Local Government Board to define the limits of the classes for whose treatment hospitals are required. But it is clear they ask an impossibility. If it has been found difficult to draw any distinction between a pauper and an independent poor person in the case of small-pox, it will be found far more so in that of cholera. Whilst inquiries are being made as to the antecedents of the patient life may pass away. Promptitude is the very basis of successful treatment; and it is absurd to make any difficulty whatever in the admission to the public cholera hospitals of any persons who require the accommodation they provide. There is also another insuperable difficulty in imposing upon any one authority the duty of providing cholera hospitals. Long ago it was shown conclusively that they must be placed in the very midst of the infected districts. Many patients labouring under small-pox have been killed by removal to the present hospitals from a distance of several miles; but no cholera patient would survive conveyance from Chelsea to Hampstead. If, therefore, cholera should unhappily come, it will be indispensable to have numerous small refuge hospitals, to which admission shall be readily gained by all persons who find themselves unable to obtain proper nursing and treatment in their own dwellings; and the question of their ability to pay must be altogether set aside until that of life and death has been determined.

We fear the Local Government Board has not as yet thrown off the traditions and trammels of the Poor-law Board, and that the economical idea of utilising empty hospitals may have exercised too much sway. But the *Dreadnought* will be just as much a hospital in the hands of the authorities of the port of London as in that of the managers; and the managers ought to have no difficulty in placing a considerable number of beds at the service of the local boards without accepting the responsibility proposed to be put upon them by the Local Government Board. Indeed, if cholera should extensively prevail, it is hopeless to suppose that the managers, who have already five large establishments to govern, would be able to set up and supervise the hundred local hospitals which would be absolutely required. We are glad, therefore, to observe that the managers have fully appreciated the importance of the question submitted to them, and have adjourned its discussion to a future meeting.

THE North London Philharmonic Society have promised a series of concerts for the amusement of the patients in the Royal Free Hospital. The first was given on Monday last, and comprised a symphony of Beethoven, some lighter dance music, and some excellent singing. It was really delightful to observe the pleasure evinced by the large number of patients who by various means were able to reach the apartment in which the concert was given, and it is impossible to doubt that such entertainments are likely to facilitate the cure of their ailments.

Medical Annotations.

"Ne quid nimis."

NEW MEDICAL ARRANGEMENTS IN THE FIELD.

AMONG other things contained in Sir Garnet Wolseley's "Soldier's Pocket-book for Field Service," we find that he considers the hospital accommodation requisite may be roughly put down at from 5 to 10 per cent. of the force in general hospitals at or near the base of operations, and about 10 per cent. with the army, and between it and that base, in field and divisional hospitals. The number of doctors required may, he considers, be put down at 1 for every 40 sick or wounded. In providing for the care of the sick and wounded of an army, it is advisable to avoid collecting more than about 500 of the former, or 250 of the latter, in any one spot. Any buildings that are erected should be spread over as much space as possible, consistent with facility of administration. No tent or building should have more than twenty beds. All experience is in favour of canvas structures for wounded, and where hospitals have to be provided for large numbers one-fourth should be in tents, and three-fourths in huts. The number of attendants is reckoned at 2 per marquee of 15 sick. Sir G. Wolseley expresses himself emphatically to the effect that no accumulation of sick should ever be allowed in field hospitals, but that all cases not likely to recover in a few days should be got rid of by being sent to hospitals in the rear. Hospitals crowded with sick and wounded have "a depressing influence upon the spirits of the men, and they are millstones around a commander's neck, preventing rapid movements." Every field hospital should have a flag flying on it, with the number of the division; and small yellow flags should be erected by the ambulance men at every four or five hundred yards from the field hospital to the centre of the division, so as to indicate the direction of the hospital. As regards general hospitals, it is urged that it is always preferable, as well as more economical, to construct huts for stationary hospitals, with 600 cubic feet per patient, than to convert existing buildings for the purpose. It is laid down that, as a rule, accommodation will be required in general hospitals at the rate of 1400 beds for each army corps. It is intended that the duties formerly performed by the purveyor's department shall, in future, be done in all hospitals by subordinates of the medical department.

It has been customary hitherto to provide for the conveyance of sick and wounded regimentally, but it would be absurd to attempt such a system for a large army in the field, and the following organisation, according to Sir G. Wolseley, has now been approved of. For each division, 70 ambulance waggons, 7 medical officers, and a detachment of the Army Hospital Corps, consisting of 3 officers, 9 non-commissioned officers, and 150 stretcher-bearers. For a brigade of cavalry, 16 ambulance waggons, 2 medical officers, and a detachment of the Army Hospital Corps, consisting of one officer, 3 non-commissioned officers, and 36 stretcher-bearers. These numbers include all persons required for tending wounded on the field, and for collecting and placing them in the ambulances, and ministering to their wants during the journey to hospital. The horses, drivers, and officers to look after them, for these ambulance waggons, will be found by the Army Service Corps. In concluding our analysis, we may state that Sir G. Wolseley's information has probably been derived from data furnished by the medical service, and that the arrangements are, in the main, those which have been proposed by the Director-General of the Army Medical Service, and submitted to the authorities for their approval.

PRELIMINARY EDUCATION.

IT is satisfactory to know that each of the 500 students now entering upon their medical studies in English schools must have given some proof of his having received a fair general education. The three principal examinations at which these young men present themselves are the Matriculation Examination of the University of London, the Preliminary Examination conducted by the College of Preceptors for the Council of the College of Surgeons, and the Examination held by the three medical examiners in Arts of the Apothecaries' Society. We believe the severity of the test is in the order in which we have placed the examinations, the University of London rejecting one-half, and the College of Surgeons one-third of the candidates at each examination. The popularity of the three is not, however, in precisely an inverse ratio, as might have been anticipated; for we find that of the 551 students who registered in England last year, 271 were certified by the College of Surgeons, 115 by the Apothecaries' Society, and only 69 by the University of London.

We have recently opened our columns to complaints respecting the examinations held by authority of the College of Surgeons; but really there seemed little valid ground for grumbling, save in the case of the chemical paper, of which we took upon ourselves to expose the crotchets. We recommend the parents of all unsuccessful or intending students to peruse a paper entitled "Jottings from an Examiner's Note-book" in *Fraser's Magazine* of September, and to lay to heart the following extract from it:—"If schoolmasters and anxious parents and guardians are wise, they will do well enough to think much of the 'logies (or 'ologies as they are called) and the higher 'curriculum,' as it is the affectation to name the more advanced course of instruction; but they will do better to think more of the humbler attainments, the three R's, of which we talk so much for the poor, and think so little, till too late, for the children of the richer classes of society."

Some discussion has lately taken place in the daily journals concerning school-teaching and school-hours, but the real point at issue seems to us to have been missed—viz., the absolute want of *teaching* under which our school-boys grow up. The average schoolmaster sets a lesson and hears it, but he does nothing to *teach* the pupil, who, if honest, has to fag out the lesson for himself, or, if the reverse, has recourse to a "crib." When one sees men of eminence in medicine devoting valuable hours to teaching their pupils, is it too much to require the pedagogue, who has nothing else to do, to devote himself for a few hours daily to the real work of *instruction*?

THE MEDICAL SOCIETIES.

WITH the commencement of the Winter Session the various medical and scientific societies spring up again into existence, and the devotees to science will shortly not want opportunities for the cultivation of their special subjects. The scheme of amalgamation of the medical societies of London having been shelved, at least for a time, each will pursue the even tenour of its way, and possibly as satisfactorily as if it had become a "section" of one great scientific body.

The Obstetrical Society was this year, rightly enough, the first to bring forth, and its Fellows met on Wednesday last in the upper rooms of the Medical and Chirurgical Society's house, the ground floor of which is still undergoing alteration. The Pathological Society will meet in the same rooms on Tuesday, the 17th inst., and the Clinical Society on Friday, the 13th inst.; and we would strongly urge the younger members of the profession, who are anxious to find a field

for *bonâ fide* work, to join these sister societies, since the expense is small, whilst the advantages to be derived from them are large. The Fellows of the Medical Society of London will reassemble on Monday, the 16th inst., at George-street, Hanover-square.

It will be remembered that at the last meeting of the Royal Medical and Chirurgical Society the President announced an intended alteration in the date of meeting, and it was proposed that the Society should meet on the second Tuesday in October, instead of November, and terminate its sittings in May instead of June. Unfortunately, the proposed arrangement cannot be carried out in its integrity owing to the backward state of the alterations going on in the Society's premises, but the first meeting will be held on the fourth Tuesday in October, the 24th instant. The alterations in Berners-street will but slightly affect the meeting-room in which the Society assembles, but will afford to readers in the library greatly improved accommodation by means of a room built behind the meeting-room, and on the site of some stables. The accommodation for books will also be greatly increased, and thus the labours of the very attentive sub-librarian will be lightened, whilst the comfort of the Fellows will be consulted.

ARMY MEDICAL DEPARTMENT.

THE present Government will have to do something ere long to relieve the stagnation existing in the Army Medical Department. It is not creditable to this country that grey and bald-headed men should be seen accompanying regiments and batteries of artillery into the field as assistant-surgeons. It is needless to add that when men begin to lose hope of promotion and come to regard their prospects as a kind of dead level, they become discontented and spiritless; and when promotion does eventually arrive to such it very likely finds them devoid of energy and independence. There is at present little or no stimulus to exertion in the subordinate ranks of the Army Medical Service. Now, we hold that this state of things is but little calculated to serve the interests of the public. No Liberal Government, unfortunately, has ever done anything for our profession in the public services, and the present ministry is pledged to economy. With all their remodeling and reconstructions they will not secure a contented or efficient body of medical officers unless they can manage to maintain the flow of promotion. There are only two ways in which this can be done, as it seems to us—namely, by limiting the period of service of the inspectorial ranks, and by offering some inducement for men to retire at twenty years. The inspectors of the Indian Medical Service hold their appointments for five years, and the same rule might be applied to the British service. We have a precedent for earlier retirement in her Majesty's late Warrant for the retirement of officers of the Royal Artillery, the principle of which might be applied to the army medical officers. The object is to facilitate promotion in the Royal Artillery, by removing existing restrictions as to the number of officers permitted annually to retire on half pay, and further, as a temporary measure, to provide for the retirement upon annuities of a limited number of officers of the rank of captain, second captain, or lieutenant in that corps. Under the latter head we find that it is her Majesty's will and pleasure that a limited number of officers of the above ranks shall be permitted to retire permanently upon annuities in accordance with the following scale:—After serving on full pay for 22 years, £225; 21 years, £208; 20 years, £191; 19 years, £176; 18 years, £161; 17 years, £148; 16 years, £135; 15 years, £122; 14 years, £110; 13 years, £99; 12 years, £89; 11 years, £79; 10 years, £69; 9 years, £60; 8 years, £51. As medical officers enter the service at a later period of life than those of the Royal Artillery, it would be but equitable to allow them a slightly increased scale.

INFLUENCE OF WOORARA ON THE TEMPERATURE OF THE BODY.

AN essay on this subject appears in the *Centralblatt* (No. 26) by Dr. Franz Riegel, in which he states that, having found in a large number of experiments on the effects of various agents on the temperature of the body and the generation of heat, where the effects of muscular exertion had been set aside by the injection of woorara, there was a constant and nearly equable fall of temperature beginning from the period of narcosis after antecedent convulsive movements, he determined to follow out by careful experiment the action of the woorara alone. The results obtained from his numerous experiments on dogs and cats essentially corroborate those of Röhrig and Zuntz; and show that, without exception, the temperature of the body falls from the very commencement of the muscular paralysis. Tscheschichin's more recent experiments on the same subject, he points out, were almost valueless, as no arrangements were made for the maintenance of artificial respiration, and consequently the animals all rapidly died. M. Riegel's researches, some of which extended over a whole day, readings of the thermometer being taken every five minutes, showed a fall of temperature amounting to two, three, or even more degrees centigrade. A fall of temperature, though to a less extent, occurred even when the animals were wrapped in wool. Another series of experiments were made on animals (principally dogs) in which fever was excited by the injection of pus into the veins; and it was found that even in this state the temperature was lowered by the action of woorara to the normal average, or even below it.

THE STUDENT'S ARMAMENTARIA.

AMONGST the many students now entering the walls of a hospital for the first time, there may be some to whom a list of the principal works and instruments they will require may be useful. "Some books," says Lord Bacon, in a well-known passage, "are to be tasted, others to be swallowed, and some few to be chewed and digested. That is, some books are to be read only in parts; others to be read, but not curiously; and some few to be read wholly, and with diligence and attention." The student's books should be exclusively of the latter class. No mistake can be greater than for the first-year's man to have several books on the same subject. He will gain nothing by comparing authors. Nor should he buy the largest and most comprehensive he can obtain. For a student to commence with a cyclopædia is as though a man should gain a knowledge of a building by touching every brick. A bird's-eye view of each subject, enabling him to grasp its salient points, is what he really wants; and this he may acquire from a small compilation much more readily than from a bulky tome. Wherefore let him seek out the shortest he can purchase, and read it wholly, and with diligence and attention. Some of the best anatomists we have known used Stanley's Dissector, a little book of barely 250 small octavo pages, now unfortunately out of print. In regard to instruments, he should purchase a dissecting-case from a good maker. He will do wisely to attend the general out-patient practice, as well as that of the special departments connected with every hospital. He will thus familiarise himself with the physiognomy of disease, and see how such instruments as the stethoscope, catheter, ophthalmoscope, and laryngoscope are used. We would recommend him to obtain at once a

cheap (and he can now obtain a good as well as a cheap) microscope. Numerous makers will supply him with an instrument of excellent quality, that the earlier observers would have been charmed to possess, with an inch and a quarter power, from three to five guineas, and upwards. With an instrument no better than this, half, or more than half, of the most important advances of the last thirty years have been made; and it will fully answer all the purposes for which the student may require it. No doubt the magnificent microscopes of Ross, and Smith and Beck, and Powell and Lealand, are greatly superior; but microscopic work, like other departments of knowledge, is an art, and is best learned by practice with the simplest objects. Finally, a few shillings will put him in possession of half-a-dozen test-tubes, with the reagents required to ascertain the presence of sugar or albumen in urine. With a few feet of glass tubing, costing a few pence, and some clean olive-oil flasks, he may make a great number of experiments with gases and fluids; and we would suggest the constant use of the metrical system in weights and measures.

ST. THOMAS'S HOSPITAL.

THE opening of the medical school at the new St. Thomas's Hospital seems to have furnished the now famous Treasurer with another opportunity of magnifying his office and showing his omnipotence. It will scarcely be credited that the opening of the new medical school took place at the opposite extremity of the building to that at which the school itself is placed; and that, while half-a-dozen theatres, which would have afforded ample accommodation for everybody, were standing vacant, the opening ceremony was held in the board-room of the Treasurer's residence. Sir Francis Hicks seems to find his new building so attractive to his lady friends that he was obliged to fill the greater part of the board-room with these fair interlopers, and consequently the members of the medical staff had to shift for themselves, and the bulk of the students, to whom the address should have been directed, were "nowhere." It is not surprising, then, that there should have been some disorder and a qualified reception of the Treasurer; nor that, when Mr. Le Gros Clark specially addressed himself to the students commencing their labours, a voice should have replied, amid much laughter, "They're all outside."

THE HOME SECRETARY AND THE CONTAGIOUS DISEASES ACTS.

IN addressing his Renfrewshire constituents on the 30th ult., the Right Hon. H. A. Bruce took occasion to refer to the Contagious Diseases Acts. Of the repressive agency of these measures he had no doubt whatever. Devonport, for example, which used to contain whole streets in which every house was a brothel, bears striking testimony to the right hon. gentleman's statement. Since the Acts have been enforced in that seaport, such haunts have positively been reduced to three; while a corresponding change for the better has been wrought upon their inmates. When, in terms of the Act, the women had to be taken from the brothel to the hospital, they had to be clothed—so wretchedly ill-off were they; so filthily did they live! Their number—between 3000 and 4000—included not less than 200 girls between the ages of thirteen and fourteen; but now Devonport does not possess more than from 600 to 700 prostitutes altogether, while not a single child under fifteen was known by the police to be following the dreadful trade. Nay, further: the police, seeing innocent young girls entering for the first time the casino or the low music hall, had, in innumerable cases, warned their parents of the risk their daughters were running; and so saved them from ruin. Other girls, moreover, who had come up from the country to walk the streets of Devonport had, on learning that they would be under police surveillance, returned to their parents. Facts like these, however familiar to the profession, cannot be too often stated and brought home to the public. It formed no part of the Home Secretary's duty to dwell on the more purely sanitary benefits wrought by the Acts—the diminution in extent and virulence of a loathsome disease so protean in its fell activity as to contaminate and impair the constitutions of children even to the third generation. These will make themselves felt in good time. Meanwhile we have to thank Mr. Bruce for having spoken out, thus decidedly and manfully, on the most delicate of subjects before not the least fanatical of audiences.

REGISTRATION OF STUDENTS.

THE authorities of the College of Surgeons and Apothecaries' Hall still insist, we find, on wasting the students' time by requiring them to register in person at those institutions. How long the General Medical Council will permit these corporations to set their express wishes at defiance remains to be seen, but surely some of the recently elected councillors of the College of Surgeons must be sufficiently aware of the uselessness and inconvenience of the present system to put a stop to it. The supposed check upon the certificates of absent pupils is really an insult to the teachers, and is perfectly futile as a remedy, for, in these days of rapid locomotion, presence on a given day in Lincoln's-inn-fields or Blackfriars does not necessarily imply more than a few hours spent in the metropolis.

We regret to find that we a little understated the annoyances of the student in our former article. We were under the impression that the officials of *all* the schools took the trouble to forward to the Registrar of the General Medical Council the forms supplied for each student to fill up on entering at a medical school, together with the certificate of preliminary education; receiving in return a certificate of registration to be handed to the pupil with the returned preliminary documents. It appears, however, that the officials of Guy's, St. George's, St. Mary's, Middlesex, Westminster, and Charing-cross Hospitals do not thus assist their pupils, who have consequently to make a *third* journey to Soho-square, there to do what could have been more readily done for them by the secretaries of the above institutions. It is to be hoped that these latter gentlemen will not fail to take this, to them, slight extra labour upon their shoulders for the future.

We noticed the other day that the College of Physicians alone acted up to the law in requiring four years' study subsequently to entry on the Medical Students' Register at Soho-square, and we repeat the statement, as we understand that the necessity for registration there is decried as unimportant by the officials of the opposition registrations. We may mention, as showing the small number of cases of registration as pupil or apprentice before the commencement of the *bonâ-fide* medical student career, that in the three years 1868, 1869, and 1870, there were but 9, 5, and 5 instances respectively.

INSPECTION OF SHIPPING.

WE are compelled once and again to refer to an unsatisfactory item of discord in connexion with the inspection of vessels (that arrive from "suspected" places), as carried out in some of the northern ports. "A Shipowner" writes to the *Shipping Gazette*, complaining that his vessel was overhauled by a medical inspector in Leith roads, and a charge of three guineas was made for the resulting certificate of health. We took occasion a fortnight ago to

comment upon this practice, and again remark that it would be well if the question were definitely settled by a circular letter from the legal department of the Local Government Board. As the matter now stands, it is probable that this grievance will be forwarded to the Marine Department of the Board of Trade, and will eventually filter across Whitehall to the Local Government Board Office, some weeks after the masters of vessels have commenced to try how frequently and completely the inspectorial system can be evaded altogether. We may remark parenthetically that the local authorities of the port of London "care for none of these things." There is no duty on disease imported by way of the Thames, for, in spite of the advice and warnings of Dr. Buchanan, the counsellors of the waterside districts, or the so-called Thames Shipping Inspection Committee, evidently think that "their strength is to sit still."

THE SANITARY CONDITION OF BERLIN.

A WRITER in the *Standard* of the 30th ult. gives an account of the sanitary condition of Berlin which can scarcely be regarded as satisfactory. It seems that of late years the population has been steadily growing ahead of the house accommodation, and now that Berlin has become the veritable capital of the German Empire, and fresh inhabitants are almost daily arriving from all parts of Germany, together with the fact that, owing to the war and the masons' strike, all building operations were almost at a standstill during the past year, things have reached a climax. Rents have everywhere risen, and with the rents there has coincidently been a proportionate rise in the price of all the necessaries of life. In consequence of the rise in rents, many of the poorer classes will be unable to meet their liabilities on quarter day, and will be subjected in many instances to summary ejectment. The prospects of the forthcoming winter are gloomy enough, and if, as we have every reason to believe he does, the writer in the *Standard* gives a faithful picture of the state of the city, we must be prepared to see the inevitable consequences of overcrowding and hunger. We must not forget that the cholera has been hovering in the immediate neighbourhood of Berlin, and that some few cases have already appeared in the city itself; and if the inhabitants allow themselves to be lulled into inactivity by the belief that cholera is unable to spread in the winter months, they may find that they have been leaning on a broken reed. We hope that some of the huge war indemnity may be devoted to the improvement of the capital of that empire which has resulted from the victories of the German armies, and that a state of things such as has been described will speedily cease to exist.

THE RECENT CASE OF SUICIDE AT KINGSLAND.

WE have received, and have much pleasure in publishing, the following resolution passed unanimously at the annual meeting of the Herefordshire Medical Association held at Hereford on September 27th.

"That this Society hereby expresses its sympathy with Messrs. Barnett and Chattaway, in the painful position in which they have been placed by the unjust comments which have appeared in several publications upon their conduct in the recent case of suicide at Kingsland. This Society is of opinion that their conduct, acting as they did under the written order of the coroner, was marked throughout by delicacy, kindness, and propriety."

We cannot, however, plead guilty to having made any "unjust comments" on Messrs. Barnett and Chattaway, and regret that such should have appeared elsewhere. These gentlemen were, doubtless, actuated by the best motives, and acted as they believed in accordance with the law. The last number of THE LANCET (issued since the meeting above referred to) will have convinced them that we were not in error when we characterised the whole proceeding of the coroner as illegal; and they may have the satisfaction of knowing that the attention excited by the melancholy termination of the case in which they were engaged may be the means of preventing their professional brethren from being involved in similar disagreeable enquiries.

GUY'S HOSPITAL.

THE question of the continuance of the introductory lecture at the opening of the session was seriously canvassed at some of the larger schools last October, owing to the disturbance which arose at more than one of them, and which caused the discontinuance, a few years since, at St. Bartholomew's of any address to the new students. We last year adverted to the disgraceful scene at Guy's Hospital, and we feel it our duty and pleasure to give our meed of praise to the staff, assisted by the senior students, who were enabled this year to preserve the order and decorum consistent with the dignity of the meeting. Everything passed off in the most orderly manner, and as an introductory lecture should; with the exception that the theatre was too small to admit all that desired to enter. It becomes a very serious question, we know, amongst the staff what measures, short of erecting new theatres, &c., can be divised to accommodate the very large class of students congregating on such and kindred occasions as happened last Monday. The school appears to have outgrown its buildings.

A WORD FOR DR. TRENCH.

A GREAT public clamour has been raised by the Liverpool press against the site proposed by the Health Committee for a cholera hospital. It is objected that the place is too near the docks, on too low a level, in the midst of poor streets in which cholera has prevailed in previous epidemics; that the surface is foul from the refuse of surrounding factories, and the subsoil undrained. Dr. Trench has been severely handled for having sanctioned such a dreadful spot, and the Local Government Board have been called upon to insist upon the adoption of some higher and more wholesome site for the erection of the hospital.

It is curious that the gravest objections here urged are in fact the best arguments in favour of the Health Committee's proposal. If cholera should invade Liverpool, it will certainly arrive in or near the shipping, and will prevail first and chiefly in the lowest and dirtiest localities. As cholera patients will not bear removal to any distance from their place of seizure, the hospital must therefore be in such a situation. The Health Committee may readily drain the subsoil, and after cleansing the surface they can keep down any emanations by a layer of concrete or asphalte. Thus, as it appears to us, every possible objection is removable.

HORACE WELLS.

A MOVEMENT has been inaugurated by the well-known dentist Mr. C. J. Fox to provide an annuity for the widow of the late Horace Wells, of Hartford, U.S.A., the originator of modern anæsthesia. It is only natural that the dental profession, whose members have now, after a quarter of a century's disuse, returned to the daily employment of the original anæsthetic, nitrous oxide, should have had their attention directed to the original discoverer of the use of the gas for dental purposes. Wells was indubitably the first to put in practice the suggestion of Sir Humphry Davy that nitrous oxide might be employed as an anæsthetic, and it was after attending an exhibition of the effects of the

"laughing-gas" on December 18th, 1844, that he formed an opinion respecting its anæsthetic uses, which he proved in his own person the next day. The failure of the gas on one or two occasions from causes now readily intelligible, the introduction of sulphuric ether by Morton and Jackson, and the subsequent discovery of chloroform by Sir James Simpson, completely overshadowed the original merits of Horace Wells, who, disappointed and ruined, perished by his own hand.

Those who are interested in the subject will find the full historical details in a work by the Hon. Truman Smith called "An Inquiry into the Origin of Modern Anæsthetics," which was reviewed in THE LANCET of May 7th, 1859, and from which copious extracts are given in the *British Journal of Dental Science* of the current month.

We understand that Mrs. Wells is in great need, and we think that both members of the dental profession and their patients may well be called upon to contribute their mite towards the fund now in course of formation. Mr. J. T. Clover and Mr. F. W. Braine, both of whom are well known as having had much to do with the administration of anæsthetics, have consented to act as treasurers of the fund.

COTTAGE HOSPITALS.

COTTAGE HOSPITALS and convalescent homes are two outward and visible signs of the growth of what may fairly be called common-sense principles in our treatment of the sick. We have received the last report of the Shedfield Cottage Hospital, which was opened about four years ago. We can do little more than remark that a great deal of good appears to have been accomplished at a comparatively small cost, inasmuch as the last balance-sheet indicates a total expenditure of £228, and the report of Dr. Murray, one of the visiting physicians, shows that 35 in- and 165 out-patients were treated in the course of the year. The maintenance charge for in-patients during their stay in the hospital is half-a-crown a week, and donors or collectors to the amount of five guineas are entitled to three in-patient or twenty-four out-patient tickets during the twelve months. The services of the medical officers are honorary. A perusal of the financial transactions of this and other village hospitals might possibly be profitable to those who are entrusted with the management of large metropolitan charities, where *gratuitous* advice and medicine are given in never-ending streams, with small profit either to donor or recipient.

SANITARY ORGANISATION IN LAMBETH.

IT is extremely desirable that the Lambeth Vestry should embrace the opportunity of Dr. Puckle's resignation to modify the present sanitary staff. Dr. Puckle's health has been completely broken down by the onerous duties he has been expected to perform, but it seems almost impossible that a single unaided officer, no matter how great his zeal, should be able to conduct the business of so large and so populous a parish in a way satisfactory to all parties. The vestry would do well to adopt the suggestion of the Royal Sanitary Commissioners, and give their medical officer the assistance of the Poor-law district medical officers as deputies. Their duty should be confined to supplying him with facts, which they have great opportunities of becoming acquainted with in their visits to the poor. No persons have a deeper interest in preventing overcrowding, in securing the removal of filth, in checking the beginnings of epidemic disease, &c., and it only remains to place them on the sanitary staff under an efficient chief to secure such an improvement in the health of the labouring poor as would materially reduce the rates.

SEWAGE IRRIGATION.

IT is extremely gratifying to notice the increased favour with which the question of sewage irrigation is being regarded by the public and by many local authorities. This result is probably due to increased knowledge on the subject, and to the introduction of sounder principles of treatment. When the practice of sewage irrigation was first introduced the Edinburgh system was thought a grand model, and even now there are many who think Croydon a most successful farm. But it is to Mr. Hope and Mr. Bailey Denton that the public chiefly owe the sound principle of deep drains and deep cultivation. On the catchwater system, the foul liquid flows over the surface of the ground, and, as it cannot penetrate for want of outlets underneath, it stagnates and forms a most objectionable swamp. But where the ground is light and porous, and where the drains are deeply placed, the sewage sinks beneath the surface, loses all its odour by contact with the earth, and, the organic matters being appropriated by the roots of the growing plants and by the soil itself, the residue flows out at the drains as water, purer than many of our streams. The difference between the two systems is radical; and, as we have no expectation that sewers and water carriage will ever be dispensed with, it is hopeful to find that there is a good prospect of success for sewage irrigation.

SCHOOL-BUILDINGS.

IN the face of the erection of a large number of school-buildings, it is extremely desirable that the plans should be submitted to some sufficient sanitary authority before being carried out. It is not too much to say that some of the grandest-looking erections, not only for national, but for the highest class of endowed schools, are utterly devoid of proper means of ventilation. At one of our most distinguished public schools we have seen the urinals and class-rooms opening on the same corridor, and hosts of gloomy-looking school-rooms where the only effectual supply of fresh air came from the open door. If sweetness and light are requisite anywhere they are in a school-room, and we hope that something more will be required than so many square feet of surface and so much height for every pupil.

PHYSICAL SCIENCE IN AMERICA.

WE learn from *Nature* that, "by resolution of the Board of Regents in 1870, the Iowa State University has finally cut loose from the old college course. Only by this resolution placing the elements of physical science at the very beginning of the course can instruction become thorough. For the first time the students in physical science have been offered facilities not too inferior to those they have for ten years enjoyed in other branches of learning. And with what result? Young men and young women, boys and girls, measuring, weighing, testing, demonstrating, and recording fact upon fact in physics that, at least in our school-days, were pored over in a maze of bewilderment in driest of text-books, to be bolted in sections without question." All praise, say we, to the Iowa State University for attempting a bold innovation, that, however opposed to the practice of ages, is yet in accordance with common sense, and as an experiment is sure to succeed.

DRUNKENNESS AND DEATH.

IF a poor woman is seized with a fit of apoplexy in the street, the chances are that she will be removed by the policeman to the station-house and shut up in one of the cells to die. This has been repeatedly the fate of persons in such circumstances; and two cases have oc-

curred within the last fortnight. As it is better that a hundred drunken people should be wrongly sent to hospital than that a person taken suddenly ill should be incarcerated in a cell, it is time that the power of policemen should be curtailed in respect of shutting-up any drunken person without a medical certificate that life will not be endangered. We therefore call upon Colonel Henderson, and, if he has no power, on the Home Secretary, to issue an order to that effect. British law has hitherto been considered the bulwark of personal liberty, and it is intolerable that dying people should be shut up in a police cell because policemen and inspectors have not received a medical education, and are unable to distinguish between drunkenness and apoplexy.

HOSPITAL OUT-PATIENT REFORM.

IT is to be hoped that the very excellent letter of the Rev. W. Kitto of Poplar will resuscitate the flagging public interest in this most important question of out-patient hospital reform. We have done our best to lay bare the enormity of the imposition, waste, and injustice towards the profession which prevail, and the committee which reported on the subject has offered most valuable suggestions in the way of remedy. It remains only for the public to take the matter up, and to inquire into this part of hospital and dispensary abuse, before they give their thousands. Surely a committee of governors might be found to support the reform of a system which is sapping the foundations of independence amongst the working classes, and ruining the interests of the ordinary medical practitioners who attend upon the poor.

VOX POPULI.

IF one wishes to study the aspirations of the masses, no better field for observation can be found than the advertisement sheets of "family papers," where wants and offers of every article under the sun—from husbands to hair-pins—may be perused at leisure. We lately came across a publication devoted solely to these exchanges between its customers, and were surprised to find among the "wants" and "offers" a column headed "Medical." Nor was our surprise diminished when the first article offered in this department was "a child's caul, price £3"! We were prepared to find enema apparatuses, spinal supports, wooden legs, and cabinets of medicine-bottles advertised for exchange or barter, but one can hardly conceive the state of mind of the advertiser who paid for the following announcement: "Wanted a pilch; price must be moderate." The term is not to be found in Walker, but we always understood it to refer to a very useful, though not ornamental, flannel appendage of infants, which from its uses must require frequent changing. What, then, can be the meaning of the moderate price of a single article of the kind?

CHOLERA.

IT is reported that cholera is raging in some quarters of Pera, and that the Minister of Health at Constantinople has drawn a sanitary cordon round the particular district that is supposed to be infected, forbidding ingress or egress. If medical officers have any influence in the Ministry of the Sultan, it is to be hoped that they will speedily unite in condemning emphatically so absurd and harmful a proceeding.

The weekly report of the Registrar-General records that cholera is declining at Königsberg. Three fatal cases occurred last week at Stettin. It should be recollected that vessels are frequently arriving in the Thames from this port.

A ROYAL GIFT AND A NOBLE SERVICE.

HER MAJESTY has contributed one hundred guineas to the Workmen's Fund for extending the Queen's Hospital, Birmingham. Her Majesty does not usually contribute to local institutions, and the gift will doubtless be regarded by the working men of Birmingham as a mark of special approval of their efforts. A noble service has also been promised by the Baroness Burdett Coutts, who will lay the foundation stone of the new building.

SMALL-POX ON THE WEST COAST OF AFRICA.

THE recent epidemic of small-pox was probably one of the most widely spread on record. By the latest accounts the disease appears to have been very prevalent at several stations on the West Coast of Africa. At a small-pox hospital erected at Cape Coast, sixty-four cases were treated within a short time after its being opened. But this affords no index to the number of natives really attacked, for many never receive any medical treatment whatever, and others are smuggled off into the bush, where they die miserably. The attacked are generally quite unprotected by vaccination, and the mortality is said to have been great.

UNWHOLESOME FOUNDATIONS.

MR. CROSSLEY is of opinion that the high rate of mortality which has prevailed in Leicester during the last two months, and which is due chiefly to an annual visitation of infantile diarrhœa, is caused by the practice of filling in the pits from which clay has been taken for making bricks with rubbish containing vegetable matters and other refuse. He stated that the disease prevailed chiefly in the lower parts of the town, where houses had been erected on such refuse. He gave several examples of streets and courts which are so placed, and stated that in Ward No. 1 the inhabitants had no diarrhœa because they had no made ground of this description.

DR. FRANKLAND appears to be strongly impressed with the superiority of the chalk over the river as a source of water-supply for London. He reports to the Registrar-General that during the summer months the river water delivered in London has been vapid and unpalatable, owing to its high temperature, which has ranged from 19° C. to 22° C., whilst the deep well water of the Kent Company has maintained a steady temperature of 15° C.

THE fourth annual general meeting of the Association of Certifying Medical Officers of Great Britain and Ireland will be held at the Adelphi Hotel, Liverpool, on Friday, the 20th inst., at 2 P.M. The members will afterwards dine together. Gentlemen intending to be present at the dinner are requested to signify the same to the honorary secretary, Mr. Stansfeld, Redland, Bristol, on or before Tuesday, the 17th inst.

AT a special meeting of the Governors of the Middlesex Hospital on Thursday, October 5th, Mr. George Lawson was elected an extra surgeon to the hospital. Mr. Andrew Clarke was elected assistant-surgeon to fill the vacancy caused by the above promotion. Mr. Andrew Clarke was a student of University College, and has held various junior appointments at the Middlesex Hospital with distinction.

A WRITER in *The Times* describes the sickening effect of an irruption of twenty tons of sewage into his cellar. He was told to be thankful that of his eleven children only three had been attacked with diarrhœa. He is certainly to be congratulated if there should be nothing worse.

THE Secretary of State for War has, with the concurrence of the Lords Commissioners of the Admiralty, appointed Sir Alexander Armstrong, K.C.B., Director-General of the Medical Department of the Navy, a member of the Senate of the Army Medical School at the Royal Victoria Hospital, Netley. This is as it should be, for the naval department has now a large interest in the well-being of the Netley School. We hope the appointment of Dr. McDonald, F.R.S., as naval professor, will not be longer delayed.

THE Governors of Bethlem Hospital have obtained an Act of Parliament enabling them to establish and maintain a convalescent branch at Witley, near Godalming. The institution will be visited by the Lunacy Commissioners; but it is intended as a place of transition from the restraints of the existing hospital to entire freedom.

A CONVENIENT and well-designed cottage hospital has recently been established at Tenby; and at its formal opening, on the 22nd ult., Dr. Dyster, who had advanced £200 to the building fund, generously made over that amount as a free gift to the institution.

THE Medical Committee of the Society for the Organisation of Charity are preparing rules for provident dispensaries. It is a sufficient guarantee of their excellence to mention that Dr. Ford Anderson is one of the most active members.

A MOST elaborate report has just been presented by the Sewage Inquiry Committee to the Corporation of Birmingham. The report embraces the whole question of sewage removal, and will receive a special notice next week.

DR. JOHN LOWE, of King's Lynn, has been appointed, we understand, as medical attendant to the household of their Royal Highnesses the Prince and Princess of Wales at Sandringham.

AT a late meeting of the guardians of the Galway Union it was unanimously resolved that Dr. Considine, late dispensary medical officer, should receive a superannuation allowance to the amount of two-thirds of his late salary.

THE deaths registered from small-pox last week in London were 51, being the fewest in number recorded in any week since the 17th of December last.

UNIVERSITY INTELLIGENCE.

AT Oxford Dr. Child, of Exeter College, has undertaken the charge of sanitary inspector for the University.

At Cambridge, the Regius Professor of Physic (Dr. Bond) has issued a schedule of lectures on subjects connected with the study of Medicine, which will be delivered during the academical year 1871-2. From an appendix to the schedule the intending student of medicine will find that the dissecting-rooms and Museum of Anatomy are open daily during the vacations, as well as in the terms, with the professor and demonstrator in attendance. Practical Histology and Practical Anatomy will form the subjects of courses during the long vacation; while the chemical laboratory is open daily from 10 A.M. till 6 P.M., with the professor and demonstrator in attendance. The Museum of Materia Medica at Downing College is open daily to all medical students; while the physicians attend at the hospital on Mondays, Wednesdays, Thursdays, and Fridays, for medical, and the surgeons on Tuesdays, Thursdays, Fridays, and Saturdays for surgical instruction, at 10 A.M. Attendance three days a week during term, inclusive of the clinical lecture, and notes of cases assigned to the student, are exacted as the minimum for certificates in Clinical Medicine and Surgery. During the Michaelmas and Lent terms Dr. Bacon will give clinical instruction in mental diseases at the County Asylum, Fulbourn. Dr. Fisher, the Downing Professor of Medicine, has announced that he or his deputy (Dr. Latham) will lecture on Materia Medica and Therapeutics during the Michaelmas and Lent terms. Fee for the course, £3 3s.

At Edinburgh, Mr. H. H. Lancaster, advocate, as assessor to the Lord Rector, succeeds Mr. A. Nicolson, who has resigned that office. Applications by Dr. W. Mitchell Banks and Mr. J. Campbell-Burn, both of Liverpool, for recognition of their lectures as qualifying for graduation in Medicine in the University have been remitted to a committee. Dr. Morison-Watson has been appointed Demonstrator of Anatomy to Professor Turner. A minute of Senatus, dated July 28th, 1871, and relative to a case and opinion of counsel regarding the teaching of medicine to women within the University, were also under consideration by the University Court.

At Aberdeen the University Court have appointed Mr. David Lowson, Assistant-Professor of Anatomy, and reappointed the medical examiners. An application from the Liverpool Royal Infirmary was read, asking whether the Court would extend to the medical school the same privileges of recognition as are enjoyed by the London and other metropolitan schools; but the Court were of opinion that they had not power to agree to this, and asked the applicants to state on what ground the claim was founded.

HOSPITAL DINNERS.

ST. BARTHOLOMEW'S.

THE annual dinner of the old students of this hospital was held in the great hall on Monday last, under the presidency of Dr. Black. More than eighty old "Bartlemy's" men were present, and the company included Professor Owen, Sir James Paget, Bart., the Treasurer, Dr. Burrows, Dr. Stenhouse, Mr. Holmes Coote, Dr. Humphry, Dr. F. J. Farre, Dr. Monro, &c. Mr. Forster White, in responding to the toast of "The Governors," took occasion to remark that the authorities of the hospital were actively engaged in making preparations for the development of a Skin Department, and that they had received most valuable advice from Dr. Gee and Dr. Southey with reference to the subject. He also adverted to the success which had attended the establishment of ophthalmic wards, and thanked Mr. Power and Mr. Vernon for the energy that had conduced to that success. Dr. Humphry, as the first pupil of Sir Jas. Paget, proposed the Baronet's health in an eloquent and enthusiastic speech, and dwelt with great feeling and fervour on the intense pleasure as well as wide advantages that he had derived from continual communication with his former chief. Sir J. Paget replied with his accustomed power and brilliancy, and briefly reviewed a career that has culminated so satisfactorily. He glowingly described how, for many years, all his anxieties, hopes, and fears were centred in the 1st of October, but that now he could look back upon the past, and almost wished for the privileges accorded to an old man in the way of garrulity, that he might dilate upon a very varied retrospect, the pleasures connected with which had far outweighed the sorrows. Other complimentary toasts followed. The able supervision of Mr. Willett greatly helped the success of the evening, and the *ménu* was eminently satisfactory.

ST. GEORGE'S.

The annual dinner to celebrate the opening of the new medical session was held on Monday last at Willis's Rooms, when about 100 of the former *alumni* of the St. George's Hospital Medical School met together to renew acquaintanceship, and to drink to the continued prosperity of their *alma mater*. The chair was most ably filled by Dr. Pitman, and the dinner was all that could be desired. The series of toasts which all good Englishmen delight to honour were duly gone through, and the toast of the evening was of course received with unbounded applause. The proceedings on the whole were most pleasant and convivial

and we do not remember ever to have been present at a dinner which was in any way more cheerful or successful than the one in question.

THE MIDDLESEX.

The annual dinner of the past and present students of this hospital took place at the Freemasons' Tavern on the evening of the 2nd inst. The chair was occupied by Thos. Taylor, Esq., F.R.C.S., and there was a large attendance of guests. After the usual loyal and patriotic toasts came the toast of the evening, "Success to the Middlesex Hospital Medical College," which we need hardly say was received with the greatest enthusiasm. This was followed by the toasts of "The Chairman," "Mr. Ross, the Chairman of the Weekly Board of the Hospital," the "Orator of the Day, Dr. John Murray," and the "Present Students," coupled with the name of Mr. Lucas, the resident medical officer. Thanks to the exertions of Messrs. Turner, Critchett, Simple, Hailstone, Burnett, and Maitland, the proceedings were much enlivened by some excellent music. Mr. Ganz, who was present as a guest, kindly presided at the piano.

THE HAMPSTEAD HOSPITAL INQUIRY.

THE cross-examination of Mr. Aikman was resumed on Friday, the 29th ult., by Mr. Montague Williams. Witness had no complaint to make against No. 3 ward in point of cleanliness; but he did complain of the milk, the beef-tea, the tying-down, and the strait-jacketing in it. Testimonials written or signed by witness in favour of the principal nurses were read in court. These were of the most satisfactory description, and witness acknowledged that he concurred in their tenor. Witness did not report in writing as to the meat, which, in his opinion, was decomposed before cooking; he tasted the beef-tea (which he found abominable) only once; and that was in May, when he first came; and although he had 80 children under his care, he did not hold it to be his duty to taste the beef-tea served out to them. He was quite certain that Nurse Meredith stated to Mr. Kynaston that in one ward the patients were left without food from 7 A.M. till 3 P.M. As to the girl Louisa Stokes, witness could not tax his memory whether she was, on admission, in a very low state from small-pox, or whether she was the "fine flashy little girl" described by her father. On the whole, he would not have used the father's expression regarding her; and while still maintaining that she required extra nursing, he stuck to his statement, that every possible care and attention were paid to her—"that is, so far as Hampstead could afford." Witness repeatedly urged her removal to a village hospital. Mr. Williams next proceeded to cross-examine witness rather closely as to the affidavit which he swore under the knowledge that it was to obtain a summons for libel against the *Echo* newspaper, in which a complaint respecting the girl Stokes had appeared. Witness acknowledged that while swearing to the fact that he thought it desirable that the girl should be removed, he said nothing (though he might have said something) as to the insufficient nursing. Pressed to account for the omission of reference to the nursing, he said that, as Dr. Grieve could have asked for the reference but did not, he thought it unnecessary to make it. Before signing the affidavit he read it, and admitted it to be a true copy of what he had said; although he noticed no omission of the reference to the insufficient nursing. Cross-examined still further, he believed the girl's eye was affected by the disease, and acknowledged that everything was done to save the sight; also that everything was done to obviate the bed-sores. The girl was predisposed by her disease to contraction of the limbs, and witness did not attempt to straighten them, because it might give her pain. No definite answer could be elicited from witness as to whether the girl's emaciated condition was due to want of food; or as to whether her bed-sores were or were not the result of neglect, or as to whether a child which had received "every attention from the nurse," could be sent out with vermin. In wards containing children of different ages, he said it would be impossible to have a uniform diet, while he did not know who did regulate it; but he complied with Dr. Grieve's request to put down the number of patients, and half that number as on ordinary diet, on the understanding that the quantity would be regulated outside the ward. As to the supply of eggs, witness said that they had not been provided several days before he ordered them; and did not know that other eggs ordered on the 5th of August for children were given shortly afterwards. It was after he had resigned that he wrote and showed to Dr. Grieve the complaint as to the eggs which should have been given at 10 A.M., but were not actually supplied till 2 P.M. of the same day. Witness said there were constant complaints of the milk in No. 7 ward, but admitted that he had expressed to Dr. Grieve his satisfaction with the nurses. Witness acknowledged saying to the nurse Simpson, that the finding of the dead child was the most disgraceful thing he had ever seen; and that as to the dead body of the man in the bath-room, he did not know that the body was left there longer because of the late arrival of the person bringing the shroud. He admitted also that the foulness of the sheets was no fault of the nurses to whom he had given high testimonials. They cleaned them to the best of their ability. Witness did not see Mr. Wyatt a dozen times during his tenure of office; but spoke to him in the board-room about Stokes's case, at a meeting held *apropos* of the *Echo* article. On that occasion he gave the committee the same account to which he swore in the affidavit, and did not speak of want of nurses to them. Witness confessed to having written, but not to having posted the following placard:—"Wanted, three active and unscrupulous young men, utterly devoid of any principle of honour. Applications must contain *cartes* and fighting weight, as the superintendent is a man of little physical but immense mental power. All applications must contain previous experience with bullies, but strict secrecy as to the treatment of colleagues must be sworn to. These qualifications, with a total oblivion as to personal honesty, will be sure to secure the situation for the most enthusiastic applicant." Witness did not know who wrote the following in Mr. Kynaston's room:—"Wanted immediately, three active, intelligent, medical officers for the Hampstead Small-pox Hospital. No one need apply who is not able to prescribe, dispense, and operate with the knife and fork, as the wittals is liberal, the wages good, and the lodging all found. Send *cartes de visite*, which will be returned unless good-looking. N.B. Teetotallers preferred, as there has been a row about the beer." Witness never got candidates for the vacant appointments while those placards were up; and, with regard to the beer, admitted that up to the second week in July he had as much as he wanted; he denied indignantly the accusation that he and his two colleagues drew seventeen pints and a half of Bass's best per day; but admitted that in Dr. Grieve's absence rats were brought in (Mr. Kynaston paid for two), and were "turned down" and killed for sport by the engineer's dog and a stray one. Of this Dr. Grieve did not complain; but on mentioning the placards he drew from witness a statement that he was exceedingly sorry for having had to do with them, and that he would remove them at once. At this stage Mr. Collins read the Hospital Committee's report to the whole Board, under date July 31st. The Committee had given notice to dispense with all the staff at Islington, and to reduce the medical superintendent's, chaplain's, matron's, and house-steward's salaries. They commended the zeal of the chief officers in simultaneously working two large establishments over eight months, during which 5000 patients had been treated. Islington being closed, and Dr. Grieve having stated that by the reduction in the Hampstead patients, the establishment there could be worked with one medical officer, the committee dispensed with Messrs. Greaves and Kynaston, while, Mr. Aikman's resignation being accepted, they would take immediate steps to replace him. After the reading of this minute, Mr. Collins elicited from witness that Dr. Grieve had said he was commissioned by Mr. Wyatt to state that the reduction in the staff was the sole reason for dispensing with the services of his colleagues—and this after the rat business, and the allowancing of beer.

On Monday the examination of Mr. Aikman was resumed by the Chief Commissioner, who elicited from the witness that he had never seen the tying-down of delirious patients cause anything more than a slight abrasion of the cuticle—certainly never issue fatally. The hospital to which witness had been attached in Glasgow was much

better supplied with meat than that at Hampstead; while he had never to complain at the former of dead bodies being left for five hours as at the latter. Witness denied having countermanded water to the patients. All he said was, when a patient asked for water, "Had you not better have a little milk?" In answer to Dr. Buchanan, witness stated that in the Glasgow hospital there were 125 patients, and that before the outbreak of the small-pox epidemic there, there was a staff of trained nurses sufficient to attend to 300 or 400 patients.

The next witness called was Elizabeth Haynes, summoned a second time. In answer to Mr. Montague Williams she admitted that, having left on the same day with the three complainants, she had been living with Mrs. Winstanley, the late superintending night nurse. Witness saw Mr. Kynaston there, but neither of the other two medical officers. Mr. Kynaston called for "statements," and was in verbal communication with Mrs. Winstanley; while witness wrote down and sent a document to him. Witness did not know why she was no longer wanted at the hospital, but thought her services were dispensed with owing to the general reduction of the staff. She was not aware of any complaint against her; and denied being concerned in the theft of eleven pots of jam, two of which were found in her drawer. Sister Frances did not charge her with stealing them; on the contrary, said she that if witness wanted a reference she would give her one. Sister Frances told her that her discharge was due to the reduction in the staff; while witness knew nothing of Father Paul's having interceded in her behalf. Witness was not aware that there was too much milk in the children's wards, and that the overplus in the morning was handed over to the other wards; but had complained of the shortness of the beef-tea and milk to Sister Caroline, who, however, said nothing. Sister Caroline had forbidden witness to give milk to convalescents, witness having done so contrary to instructions and against the orders. Witness did not know why she was removed from one ward to another—which was after the "jam affair"; and made no complaint to the authorities on leaving. Witness, after she left, showed to Mrs. Winstanley the statement she was going to send to Mr. Kynaston. When herself a patient she had complained of neglect, and afterwards applied for a situation as a nurse. Witness saw the doctor untie patients; and, knowing it to be wrong, admitted that she tied them down. She never heard the doctors order children to be taken out into the open air; but by order of Sister Agnes, she did so—one child, Sarah Smith, dying soon after witness did so. The witness's evidence in chief was then read, and it was shown that the child was taken out to "play" at twelve o'clock—"play" meaning the child's being placed on a bed in the open air to be amused by the other children. Witness did not mean to say that the child was out on the day she died. As to Alice Clayton, witness said that that child was ordered a bath at 10 A.M., and was dead in bed at 12.15 P.M. Witness, after she left, went to the hospital to get a character from Sister Frances; on which occasion Dr. Grieve came in and asked if she had been forbidden by Sister Agnes to give the medicine ordered by Mr. Aikman; to which witness said "no"; but had told Mr. Aikman that Sister Agnes had forbidden her to give medicine because she was not head nurse of the ward. When witness told Sister Frances she was living with Mrs. Winstanley, Sister Frances said she (Mrs. Winstanley) would do witness no good. Witness admitted to Sister Frances that she had heard Winstanley complain once of the want of beef-tea and milk. Dr. Grieve was not present then; nor did witness tell him or Sister Frances that she made constant complaints to Winstanley, who said complaining was no good. In answer to Mr. Collins, witness said the two jam-pots were her own; that Sister Frances was very friendly when she called on September 6th; that she gave milk to convalescents because there was nothing else to drink; and, in answer to the Chief Commissioner, that under the impression that Mr. Aikman had instructed her not to give water to convalescents, she had given them milk mixed with water, and in two cases had given milk simply. The pots of jam were brought in to her, when a patient, by Father Paul, her priest. —The next witness was Jones, a draughtsman, who, in answer to Mr. Bucknill, deposed to having seen four or five cases tied down with twisted sheets, supplemented by handkerchiefs. In all cases the persons were delirious, and in none was the strait-waistcoat used. Milk was very short, and was always long in coming. The beef-tea he could not drink after tasting. Nastier stuff never went to his lips. "Nurse, give me some milk," was the general burden of the patients—milk representing drink of every kind. The meat was short and "cooked to death"—unfit to eat, in fact; as were also the potatoes. He did not see half-a-dozen fair potatoes all the weeks he was in hospital. The bread, he admitted, was very good; but the sheets between which he was placed had the marks of pus on them, as if they had been merely passed through water. He changed the ones he got for those from an empty bed. A damp sheet was brought to him next morning by a nurse, who said "Scandalous!" and went away with it when remonstrated with. When ordered "up" by the doctor he got a coat and trousers, but neither shoes nor stockings; and on finding the trousers stained inside, he took them off and went to bed again. A second pair was then brought him by the nurse. After much difficulty he got an old pair of slippers and went with these into the convalescent ward. The sheets there were also dirty, being changed every ten days; but, in his case, once in three weeks. He got lice from them, as did nearly all the patients. The towels were very filthy. A man, Ridley, refused his dinner one day as "short" and bad. Next day he was pointed out by Gee to Dr. Grieve, who told the man he would see about it. That day the dinners were cut with unusual care, and on Dr. Grieve coming in, Gee called out "Where's the man that refused his dinner yesterday?" Dr. Grieve asked the man "Which he would have?" The man took his dinner rather sheepishly to his bed, Gee looking after him with his tongue in his mouth. Witness, on complaining of the opening of his letters, was told, like the rest, that he was a pauper—a refractory pauper. The general feeling was that it was no use complaining to Dr. Grieve. Cross-examination by Mr. Williams elicited from witness that a letter signed by sixteen patients had been sent to the *Daily Telegraph* but had not been inserted. Under re-examination by Mr. Collins, the letter was produced and read. It reflected strongly on the abuses already complained of. Mr. Williams elicited that the letter was sent out by one of the patients, directed to his wife, who was to send it to the paper.

On Tuesday, the first witness called was Palmer, who deposed that he was in that hospital from the 18th of March till the 10th of May. He declared that the tying-down rubbed off the pustules, and that it was carried on in a manner which concealed it from the medical man, who came at night when the gas was turned down. Cross-examined by Mr. M. Williams, witness admitted that when the medical man came in the lights were turned up. Witness further deposed to the poorness and insufficiency of the beef-tea and milk—34 patients having only half a pint each of the latter during the night. In answer to Mr. Williams, he said that he worked as assistant when convalescent, and that then "he took care of himself." He had his food by going to the nurse's room, and being a "nurse's favourite" he had his dinner there, off meat very different from that of the patients. He deposed to the sheets being dirty; the patients in No. 4 ward were constantly complaining; and gave instances of the bodies of persons who died at 12 (midnight) and 2 A.M. being left till 6 in the morning. The towels, he added, were dirty, and the washing arrangements defective. Cross-examined by Mr. Williams, he denied he ever petitioned to stop when he was discharged; on the contrary, he was anxious to leave the hospital. He did not propose a vote of thanks to Dr. Grieve or speak of the kindness of the authorities; but he did propose a vote of thanks to Mr. Drake, the house-steward, and went back once or twice to the hospital after he had left, to take part in the concerts. Questioned by the Chief Commissioner, he could not say how he formed his estimate that during the night the 34 patients had only half a pint of milk each. Dr. Buchanan elicited from him that he heard the patients cry for water and the nurses would not give it; and cross-examined by Mr. Humphreys, he admitted that though he had made notes of what he saw in the hospital, he made no complaint on these notes to the authorities.—The next witness, Todd, was admitted on the 18th of February, and was put into wet sheets, "enough to give one his death." He saw one very delirious man tied with a rope. Messrs. Kynaston and Greaves disapproved of the tying-down, and

had the patients untied; but if very delirious, they were tied up again. Witness did not get enough of milk and could not drink the beef-tea. One pint of the milk in the 24 hours was all he got. The broth or beef-tea at dinner he could not "tackle." If he went to sleep in the night, he found on waking that his milk had been consumed by others. When convalescent he acted as nurse, and had extra meat, of which he was very glad, tough and flavourless though it was. Fourteen patients once refused to eat the dinner until Mr. Kynaston had seen the meat. The beds and sheets he described as they have already been; while poultices and other appliances ordered by the doctors were withheld. In his own case, a mustard poultice ordered at 10 A.M. was not given till 7 P.M. A man, Holmes, he said, died through neglect, and into his bed, filthy as it was, a patient named Hatcham was put. Cross-examined by Mr. Williams, he admitted that when he left the hospital he did not complain to Dr. Grieve. In answer to the Chief Commissioner, he said he came out of hospital with fourteen wounds upon him. Questioned by Dr. Buchanan, he stated that the wounds were boils due to poverty of living. During his residence in Wards 6 and 11, more than five patients died; but he never saw one of the assistant medical officers pay a visit between 11 P.M. and the morning visit. The doctor had given them up as in a "low state," from which witness thought they might have been "livened up" by better diet. The nurses were too few; and the man Holmes, though in need of nursing and feeding, could not be approached—"he smelt so." The food was put at his side, but he could not help himself. Witness had sometimes fed him. The nurses had too much to do.—The next witness called was Elizabeth Fowler, whose depositions turned chiefly on the conduct of the nurses, but contributed little to what had already been stated in evidence.

On Wednesday, depositions bearing on the tying-down of patients, the insufficiency and badness of the milk and beef-tea, the dirtiness of the sheets and towels, and the vermin on the convalescents' clothes were made by the witness Ellistie, who admitted in cross-examination that he had made no complaint of the treatment to the friends who visited him at the hospital.—Tidbury, the next witness, gave similar evidence, dwelling particularly on the watering of the milk, the ill-regulated bath-rooms, and the wet state of the floors and passages, from which he caught a violent cold, being unprovided with shoes or stockings. He also deposed to nurse Donaldson drinking the whisky and wine of the patients who were too ill to notice it. Further evidence was given by him as to the state of the huts erected in the ground of the hospital for convalescents. In reply to Dr. Buchanan, who said they were as good temporary wards as he had seen, witness said the wind came in strong enough to blow the hair off one's head. Cross-examined by Mr. Williams: Witness had seen nurse Donaldson drunk four or five times, but did not complain to Mr. Greaves. As to the bread, it was neither good nor plentiful; and as for the butter, he would not grease a cart-wheel with it.—Wilson, the next witness, deposed to the dampness of the night-gowns, the bad quality of the beef-tea, the shortness of the milk; and generally corroborated what had been said by previous witnesses; adding that he, like the rest, was afraid to complain lest the beer should be stopped.—Partridge, another witness, had to stand naked three-quarters of an hour in the receiving-ward, owing to the shirt given him being so damp he could not put it on. He corroborated, in cross-examination, the general complaints as to the milk, the beef-tea, the bedding, the towels, and the vermin.—Benyon, another witness, deposed as to the dampness of the night-gowns, the tying-down, and the delay in removing dead bodies. The huts, he said, were loathsome with filth and vermin. Cross-examined by Dr. Buchanan, he did not remember the instance of a ward being left without a nurse; and in answer to the Medical Commissioner, he stated that he never saw a patient washed by a nurse, nor was the discharge from the skin attended to in any way; but that he considered the patients fairly taken care of during the day. In reply to Dr. Buchanan, witness stated that an hour and a half was sufficient for the nurses to do their work in; that he never saw wine or whisky in the ward; and that a man in the bed next to him was ordered whisky, but did not get it.

On Thursday Mr. Henley (inspector) stated that the admission-book of the hospital should be produced, but not taken away. The inspector seriously appealed to Mr. Collins against over-laying the trial with evidence. The inquiry was not a special one, but ordered in the usual way by the Local Government Board, calling upon their inspectors, not special commissioners, to inquire into the charges brought by the assistant medical officers against the managers and superintendents of the Hampstead Hospital. They put it to Mr. Collins whether, since the examination of Mr. Aikman, the case should have been carried any further. Most of the evidence was mere repetition; and though it certainly proved the extent of the dissatisfaction, it must be remembered that the hospital had been established at a great emergency, and many benevolent ladies who had been concerned in its management would not allow the evidence to go unchallenged. After this intimation, he hoped Mr. Collins would not compel them to refuse evidence as irrelevant. The veracity of the assistant medical officers, just commencing life, had been called in question; and, therefore, a latitude of examination must be allowed. At the same time, when those gentlemen left the hospital they ceased to be connected with the Metropolis Local Management Board, and so passed beyond the notice of the inspectors. The inquiry was really a private one, the public having no right to be present, and the reporters being admitted only that the newspapers might have every information. If Mr. Collins persevered in bringing in more evidence it would be for the inspectors to consider what course to adopt.

Mr. Collins said that after a little more evidence he would call the medical witnesses.

The next witness, Bryant, then deposed to the grievances already stated *ad nauseam*. Cross-examined by Mr. Williams, he said they tied a delirious man down with three sheets and a strait-waistcoat.—Miss Kate Black was the next witness, who made depositions similar to the mass of those already made public. Personal chastisement was inflicted upon patients by the nurses, one of whom, when asked by a female patient to be kind to her as she would not live long, said, "No! old gal, you'll be off to-morrow"; and, sure enough, the next day the woman died. Two other ex-patients were then examined, and, when their depositions (similar to the majority) were taken, the court adjourned. The next evidence will be the medical.

THE SOUTHAMPTON GUARDIANS.

To the Editor of THE LANCET.

SIR,—At a special meeting of the Southampton Medical Society held at Dr. Trend's on Tuesday, September 19th, to consider what steps should be taken with regard to the recent election of a homœopath by the Southampton Board of Guardians, it was unanimously resolved to memorialise the Local Government Board on the subject. Enclosed is a copy of the memorial which was forwarded, and it will be esteemed a favour if you will kindly give it a place in the columns of THE LANCET.

I am, Sir, your obedient servant,

Southampton, Oct. 3rd, 1871. W. SIMS.

"To the Right Honourable the President of the Local Government Board.

"The members of the Southampton Medical Society, having had their attention drawn to the recent appointment by the Southampton Board of Guardians of a homœopathic practitioner as medical officer of No. 2 district of the Southampton Incorporation, beg to express to the Local Government Board the deep regret with which they view this appointment. They do so, however, not on grounds of a personal nature with respect to the gentleman appointed, but solely from a feeling that homœopathy is not entitled to rank as a rational system of medicine, which opinion is shared by all the medical authorities of this country, including the various examining boards legally empowered to grant licences to practise medicine, the medical staffs of all our large hospitals both in London and the provinces, and the medical departments of the army and navy.

"Assuming that the officer elected will treat his patients on the principles of homœopathy, this appointment virtually hands over the sick poor of the district to a system of medicine unrecognised by the profession at large; de-

prives them, in cases of difficulty and danger, of the assistance of regular practitioners, from the impossibility of these appearing in any way to sanction what they believe to be so unsound in principle; and will be the occasion of much suffering and distress in cases where a medical man requires and should have assistance from his medical brethren.

"This appointment is, moreover, directly opposed to a Minute of the late Poor-law Board, in which they refuse to sanction the appointment of homœopathists as Poor-law medical officers.

"Under these circumstances, this Society begs respectfully to urge on the Local Government Board the propriety of withholding their sanction from the authoritative introduction amongst the poor of the practice of medicine based on the principles in question.

"Signed on behalf of the Southampton Medical Society:

"J. R. WARE, M.R.C.S. &c., *President.*
W. SIMS, M.B., } *Hon. Secs.*
J. BROSTER, M.D., }

"Southampton, Sept. 23rd, 1871."

Obituary.

DR. GEORGE C. BLACKMAN,

PROFESSOR OF SURGERY IN THE MEDICAL COLLEGE OF OHIO, U.S.

DR. GEORGE C. BLACKMAN died on Wednesday, July 19, aged fifty-two. He was the second son of Judge Thomas Blackman, and was born at Newtown, Connecticut, in 1819. He graduated in medicine at the College of Physicians and Surgeons, New York, in 1840. For a time he was engaged in practice in New York City, and in Newbury, and then as surgeon to a packet-ship, in which capacity he crossed the Atlantic sixteen times. He also visited London and Paris in order to pursue his professional studies. We are told that upon his first visit to London he possessed but seventy-five dollars; and on this sum he managed to live for some months. How patiently and heroically he struggled against the many privations he had to endure was known but to few; but his enthusiastic love of surgery made every other consideration of secondary importance. He was most constant in his attendance at many of the metropolitan hospitals, but especially at King's College and St. George's, where his intelligence, eager desire for information, and courteous manners, gained him a general welcome and secured him many friends. In 1855 Dr. Blackman was elected to the Chair of Surgery in the Medical College of Ohio. Prior to this he had edited the last edition of "Mott's Velpeau," and translated, with annotations, "Vidal on Venereal Diseases." Almost from his entrance into the profession he was a contributor to medical journals.

In 1847 he was elected a fellow of the Royal Medical and Chirurgical Society—"an honour," it is stated in the *American Practitioner*, "which, at that time, and for some years subsequently, we believe, no other American had received." Professor Gross was so highly impressed with Blackman's powers and abilities that, in urging him to settle in the West, he wrote, telling him that "an empire in surgery was awaiting him"; and a friend kindly adds, "he went, took possession of the empire, and proved his imperial power."

Dr. Blackman is said to have excelled in surgical diagnosis; and, as an operator, to have ranked among the greatest of his countrymen; and, from what we know of American surgeons, it may truly be said no higher rank, in this respect, could be coveted by any. He is reported, as a student, to have evinced his love for operating by successfully practising on some cases of talipes with a tendon knife fashioned from a scalpel by the "village blacksmith."

As a teacher, Blackman was accurate, clear, and impressive, essentially practical from his great experience, and full of information from his extensive reading. His private surgical library is reported to have been one of the finest in the United States, and will probably be secured by the profession of Cincinnati for their city library. A not long illness terminated in dropsy, from disease of the liver, and this promising surgeon was cut off prematurely at the age of fifty-two, when his experience and success were commencing to be equally and abundantly useful to his fellows and to the institution to which he was attached.

We regret to learn that one who had so struggled with the caprices of fortune in his early life, and had apparently successfully battled against them, as far as his professional reputation and position were concerned, has died poor, and left a widow and children without adequate provision for their support. It is proposed by his friends in the United States to raise a subscription in their behalf, and we most cordially wish the proposal every success, in respect for the memory of one so generous and genial as a friend, so thorough and honest as a man, so practical and expert as a surgeon.

JOHN WILLIAM IRVINE, M.D., L.R.C.S., L.S.A.

THIS gentleman was the eldest son of Dr. James Pearson Irvine, who for a quarter of a century practised his profession in Lancaster. He was educated at the Lancaster Royal Grammar School, and afterwards at the University of Glasgow, where his distinguished career, in anatomy especially, led to his appointment as Curator of the Leeds School of Medicine, at which place he finished his medical studies. He obtained his diplomas of L.R.C.S. Edin. and L.S.A. Lond. in 1859, and in 1862 became a Doctor of Medicine at St. Andrews, passing his examination with high honours.

His success in Liverpool, where he commenced practice, was rapid. He was at once appointed Honorary Surgeon to the Liverpool Caledonian Schools, and subsequently to the Liverpool Dispensaries. In 1864 he was elected Visiting Surgeon to the West Derby Union Hospital, where he had excellent opportunities for pursuing the surgical branch of his profession, to which he always had a strong inclination. All these appointments he held up to the time of his death, doing his duty diligently and winning the esteem of all—patients or others—with whom his position brought him in contact. He was also an assistant surgeon to the 1st Lancashire Rifle Volunteers, where his loss is particularly felt by officers and men.

By gentlemanly bearing and scholarly attainments, Dr. Irvine had won the confidence of all who knew him, and had gained that position which great qualities in those practising medicine deserve. His affable and genial manners attracted the suffering poor in his wards, and his visits were like gleams of sunshine to them. With a kind and willing ear for all, he won from suffering humanity a love which is better than any stone man can raise over the grave, and left on the hearts of his fellows a better epitaph than pen can write. As regards his more immediate connexion with his brother practitioners, it may truly be said that there is none who knew him but will lament his untimely death.

He shone chiefly as a surgeon, and as a surgeon, operative or otherwise, he gave unmistakable signs of becoming one of the leaders in the town in which he practised. He contributed several essays to the medical papers, one on "Fever in Liverpool," in the *Medical Times and Gazette*, another on "Resection of the Clavicle with formation of the entire bone," in the pages of THE LANCET. At the time when his illness overtook him he was engaged on a paper for the "Liverpool Medical and Surgical Reports," on Amputation of the Hip-joint, that paper being the result of three successful hip-joint amputations after failure of resection of the knee-joint and for disease of the femur.

The unfortunate gentleman last spring suffered from an attack of relapsing fever, which attack was probably favoured by his unremitting labours at the fever wards of the West Derby Hospital during the fever and small-pox epidemics. He never thoroughly recovered his strength after this attack, though he still supervised the wards of his hospital, with but short intermissions. In the beginning of August last, by the strong advice of his medical friends, he was induced to undertake a voyage to Canada, on board the steamship *Germany*. He suffered from severe sickness on the second day, which prostrated him so much that, on the fourth day after leaving Liverpool, he died

quietly and painlessly of exhaustion, at the early age of thirty-three.

Owing to some unfortunate mistake at the offices of the company to whom the ship belonged, the telegram announcing his death was delayed, and thus we are only at this late hour able to announce his melancholy death.

JAMES EDWARD MALE, M.R.C.S.
(OF LEAMINGTON.)

ON Sunday, September 17th last, after a brief illness of twenty-four hours, James E. Male expired at his residence in Leamington. His health had been failing for some time past, although he continued the active duties of his profession. He has been a resident at Leamington more than thirty years. He was resident surgeon at the Warneford Hospital for eleven years before he commenced private practice, and was elected surgeon in 1854, after a severe contest. He was well known as an operating surgeon in the surrounding district. His surgical skill, great kindliness of manner, and genial urbanity attached to him all the residents at Leamington, and many of the visitors. His last illness was brief but painful. He awoke on Saturday with a severe pain in the chest, which he thought due to indigestion, and for which he took an emetic without relief; he then sent for his friend, Dr. Otho Wyer, who prescribed for him, but, finding that no relief followed, summoned Mr. Crompton, of Birmingham. Mr. Kendall also by chance accompanied him. The remedies used after this consultation proved of no avail. Early on Sunday morning Dr. James Thompson, of Leamington, was called in, and further means used with no benefit, death at last being rapid. Mr. Crompton, Dr. Thompson, and Dr. Wyer made a post-mortem examination, and found that the fatal result had been caused by rupture of the left ventricle of the heart, induced by fatty degeneration of that organ. The circumstances of Mr. Male's family make his death peculiarly distressing, as he had been recently married, and his wife had been confined twelve days previously. The town mourns for him as a friend, and his professional brethren, with whom he lived on most amicable terms, have lost a ready hand and a sympathising heart.

Medical News.

KING'S COLLEGE MEDICAL SOCIETY.—The introductory meeting of this Society will be held on Thursday, October 12th, in the library, King's College, Dr. Rutherford, president, in the chair, when Dr. Cotterill will read the address.

THE PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17, Bloomsbury-square.—Last Wednesday evening the introductory address was delivered to a crowded audience by Mr. Mackey of Edinburgh. The Pereira medal prizes in Chemistry and Botany, and a prize of books, together with certificates of merit, were awarded on the occasion. In the report which was presented the most striking feature was the success of the Society's laboratory, as estimated by the number of students entering to practical chemistry. It appeared that more students attend the laboratory than the lectures.

LIVERPOOL ROYAL INFIRMARY SCHOOL OF MEDICINE.—The following prizes and certificates of honour, gained during the past year, were distributed at the opening of the session on Tuesday last:—

WINTER SESSION.—Exhibitioners: J. L. Johnstone, W. Kelly, J. B. Lyth, T. F. Young. Surgery: J. B. Lyth, silver medal. Physiology (seniors): E. Riding, silver medal; G. W. Joseph and D. L. Parry (*æq.*), 1st hon. certificate; W. T. Hayward, 2nd do. Anatomy (Seniors): G. W. Joseph, silver medal; E. Riding, 1st hon. certificate. Anatomy and Physiology (Juniors): R. N. Pughe, silver medal; D. D. Stewart, 1st hon. certificate; G. G. S. Taylor, 2nd do. Chemistry: R. N. Pughe, silver medal; E. A. Morgan, 1st hon. certificate; E. M. Craven and F. C. Gresham (*æq.*), 2nd do.

SUMMER SESSION.—Midwifery: D. L. Parry, silver medal; T. R. Jones and G. H. Wilson (*æq.*), 1st hon. certificate; J. H. Harricks, 2nd do. Diseases of Children: D. L. Parry, silver medal; J. H. Harricks and R. Whiteside (*æq.*), hon. certificate. Materia Medica: E. Riding, silver medal; J. Bark, 1st hon. certificate; G. W. Joseph, 2nd do. Medical Jurisprudence, &c.: G. W. Joseph, prize; E. Riding, hon. certificate. Botany: R. M. Craven, prize; E. Marmon, hon. certificate. Practical Chemistry: J. Bark, prize; F. C. Gresham, hon. certificate. Comparative Anatomy: T. F. Parry, prize; F. C. Gresham, hon. certificate.

QUEEN'S COLLEGE, BIRMINGHAM.—Medals and certificates awarded at the opening of the winter session on the 3rd inst.:—

WINTER SESSION.—Medicine: W. E. Parkes, medal and 1st certificate; R. W. Edgington, 2nd do. Surgery: W. E. Parkes, medal and 1st certificate; R. W. Edgington, 2nd do. Physiology: William Spear, medal and 1st certificate: Herbert Page, 2nd do. Descriptive and Surgical Anatomy: Andrew Dodson, medal and 1st certificate; Wm. Sunderland, 2nd do. Chemistry: Edward Potts and Edmund J. Shaw (*æq.*), medal. Practical Anatomy: Andrew Dodson, medal and 1st certificate; Wm. Sunderland, 2nd do.

SUMMER SESSION.—Midwifery: W. Spear, medal and 1st certificate; G. V. Blake, 2nd do.; James Nolen, 3rd do. Forensic Medicine: G. V. Blake, medal and 1st certificate. Materia Medica: Edmund J. Shaw, medal and 1st certificate; A. B. Vanes, 2nd do.; H. G. Lowe, 3rd do. Botany: H. G. Lowe, medal and 1st certificate; A. B. Vanes, 2nd do. Practical Chemistry: H. G. Lowe and A. B. Vanes (*æq.*), medal and 1st certificate: Edmund J. Shaw, 3rd do. Sands Cox Prize: Ernest A. Elkington. Warden's Prize: E. J. Shaw and H. G. Lowe (*æq.*).

FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At a meeting of this Corporation, held on Monday, the 2nd inst., the following office-bearers were elected for the ensuing year, viz.:—President: Dr. J. G. Fleming, Visitor: Dr. G. Buchanan. Treasurer: Dr. John Coats. Hon. Librarian: Dr. J. D. Maclaren. Vaccinator: Dr. J. Dunlop. Councillors: The President (ex-officio) and the Visitor (ex-officio), Drs. Weir, James Stewart, Robert Scott Orr, H. R. Howatt, and James Stevens.

MR. G. ASHLEY DODD has kindly sent from his shooting quarters in Glen Luce, Wigtonshire, 50 brace of partridges to each of the following hospitals, for the benefit of the patients:— Guy's, St. George's, the Middlesex, Charing-cross, and the London.

Medical Appointments.

BENT, J. F. V., M.D., has been elected Medical Officer for the Broomfield District of the Bridgewater Union, vice H. Brook, M.R.C.S.E., resigned.

COOMBS, C. P., M.D., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the Castle Cary District.

DAVIDSON, Dr. G. H., M.A., has been appointed Professor of Zootomy or Comparative Anatomy at the Edinburgh Veterinary College.

FERNIE, H. M., M.R.C.S.E., has been appointed Certifying Factory Surgeon for the Macclesfield District, vice E. Newbold, M.R.C.S.E., deceased.

FITZ, S. W., L.R.C.P.L., M.R.C.S.E., has been appointed House-Surgeon to the Dover Hospital and Dispensary, vice C. A. Owen Owens, L.R.C.P.Ed., L.R.C.S.I., resigned.

FOSTER, J., F.R.C.S., has been elected President of the Bradford Medico-Chirurgical Society for 1871-72, vice E. Sugden, M.R.C.S., who retires.

FOX, J. C., M.B., C.M., has been appointed Assistant Medical Officer at the Staffordshire Lunatic Asylum, Burntwood, vice H. E. Walker, L.K.Q.C.P.I. resigned.

GREEN, F., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Settle and Horton Districts, Medical Officer for the Workhouse of the Settle Union, Yorkshire, and Surgeon to Contract No. 1 of the Settle and Carlisle Railway, vice E. Septimus Green, L.R.C.P.Ed., L.R.C.S.Ed., deceased; Mr. F. Green has also been appointed Medical Officer for the Ingleton Fells (a new) District and the Small-pox Infirmary of the Settle Union.

HAYWARD, S., M.D., M.R.C.S.E., has been appointed Medical Officer for the Overton District of the Whitchurch Union, Southampton.

HEYGATE, W. H., M.R.C.S.E., has been elected Medical Officer and Public Vaccinator for the Towcester District and the Workhouse of the Towcester Union, Northamptonshire, vice William R. Hornblow, M.D., M.R.C.S.E., resigned.

JOHNSTON, W., M.D., L.R.C.S.Ed., retired Assistant-Surgeon R.N., has been elected Medical Officer for the Southsea District of the Portsea Island Union, vice S. Alford, M.R.C.S.E., resigned; also Medical Referee for the Minerva Banking Assurance Corporation, Limited.

LOW, R. B., M.D., has been appointed Medical Officer and Public Vaccinator for the Messingham District of the Glanford Brigg Union, Lincolnshire, vice W. Terrewest, M.D., resigned.

MORISON, B. P., L.R.C.P.Ed., M.R.C.S.E., has been appointed House-Surgeon to the Hereford General Infirmary, vice J. Beavan, F.S.C.S.E., resigned.

PINDER, G. H., M.R.C.S.E., has been appointed a Physician's Assistant at the Royal Infirmary, Manchester.

PLOWMAN, R., L.R.C.P.L., M.R.C.S.E., has been appointed a Surgeon to the Coventry Provident Dispensary, vice E. Bicknell, M.R.C.S.E., resigned.

RIDLEY, J., L.K.Q.C.P.I., has been elected Medical Officer for District No. 2 of the Parish of Liverpool.

ROWORTH, A. T., M.R.C.S.E., has been appointed Medical Officer for the Grays District of the Orsett Union, Essex, vice J. H. Ford, M.R.C.S.E., deceased.

TESSIER, W. H. C., M.D., has been appointed Medical Officer for the Halden District of the Tenterden Union, vice L. R. H. Roune, M.R.C.S.E., resigned.

TIBBITS, R. W., M.B., M.R.C.S.E., has been appointed Surgeon to the Bristol Police, vice R. M. Bernard, F.R.C.S.E., deceased.

THOMSON, G., M.B., C.M., has been appointed Medical Officer to the Parochial Board of the United Parishes of Crathie and Braemar, vice Wm. Marshall, M.D., appointed to Her Majesty's Household.

WALLEY, T., V.S., has been appointed Professor of Cattle Pathology at the Edinburgh Veterinary College.

WILSON, Dr. H. S., formerly Demonstrator under Professor Goodsir at Edinburgh, has been appointed Demonstrator of Anatomy in the University of Cambridge.

Births, Marriages, and Deaths.

BIRTHS.

FARRINGTON.—On the 1st inst., at Penshurst, Kent, the wife of W. H. Farrington, M.D., of a son.

LATHAM.—On the 2nd inst., at Hackney-road, the wife of Chas. W. Latham, M.R.C.S., of twins—a girl and boy.

MOORE.—On the 2nd inst., at Brunswick-square, Brighton, the wife of Wm. Withers Moore, M.D., of a daughter.

ROE.—On the 2nd inst., at the Royal Naval Hospital, Plymouth, the wife of T. A. Roe, M.D., of a son.

SCOWCROFT.—On the 3rd inst., at Manchester-road, Bolton-le-Moors, the wife of J. Edwin Scowcroft, L.R.C.P.Ed., &c., of a son.

MARRIAGES.

BEAVAN—MARKHAM.—On the 27th ult., at Riverhead, James Beavan, F.R.C.S.E., of Hereford, to Elizabeth Ward Markham, daughter of the late T. Markham, Esq.

EVANS—FENNELL.—On the 19th ult., at St. Matthew's Church, Smethwick, near Birmingham, John Evans, Surgeon, of Cardiff, to Eliza, widow of the late Dr. Fennell, of Cardiff.

HENNESSY—HOWARD.—On the 27th ult., at Brighton, M. V. Hennessy, M.D., late of the U.S.A., to Emily, eldest daughter of the late Captain Howard.

DEATHS.

BUTLER.—On the 30th ult., Cornelius Butler, F.R.C.S.E., of Brentwood, aged 82.

DOCKERAY.—On the 25th ult., Robert Dockeray, L.R.C.S.I., of Kiltegan, Co. Wicklow, aged 47.

EVANS.—On the 13th ult., at Aberystwyth, in the 82nd year of his age, dearly loved and regretted, Griffith Francis Dorsett Evans, M.D., of The Crescent, Town Walls, Shrewsbury, Physician to the Shropshire Eye and Ear Hospital, of which he was the originator. R.I.P. Friends will please accept this intimation.

PANTON.—On the 26th ult., Geo. Panton, M.R.C.S.E., of Dorchester, aged 55.

WILSON.—On the 24th ult., at Glencarnie Cottage, near Forres, Dr. R. Wilson, Private Secretary to Francis, Marquis of Hastings, when Governor of Malta.

YOUNG.—On the 1st inst., at Southend, A. K. Young, M.D., aged 69.

Medical Diary of the Week.

Monday, Oct. 9.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Oct. 10.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M.

Wednesday, Oct. 11.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
CANCER HOSPITAL.—Operations, 3 P.M.
HUNTERIAN SOCIETY.—7½ P.M. Council Meeting.—8 P.M. Introductory Address by the President, and a paper by Dr. Daldy.

Thursday, Oct. 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2 P.M.

Friday, Oct. 13.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
QUEKETT MICROSCOPICAL CLUB.—8 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Dr. Christian Baümler, "On Cases of Partial and General Idiopathic Pericarditis."—Dr. Anstie: Conclusion of Case of "Syphilitic Neuralgia," which was reported last session, and "On a Case of Anæsthetic Lepra."—Mr. Nunn, "On a Case of Scrofuloderma treated by Woodhall Water."—Mr. George Lawson, "On the Treatment of a Case of Large Melanotic Tumour of the Eye, extending into the Orbit."

Saturday, Oct. 14.

ST. THOMAS'S HOSPITAL.—Operations, 9½ A.M.
HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Notes, Short Comments, and Answers to Correspondents.

PADDINGTON.

A REPORT on the sanitary condition of this parish has recently been issued by Dr. Hardwicke, the medical officer of health, which shows, in many respects, a state of things that must, on the whole, be gratifying to the health officers, the ratepayers, and the vestry. The population of the parish is 96,784, showing an increase in the last ten years of 20,990; and, in addition to the human population, there are kept in stables no less than 7000 horses, each one of which consumes, according to Dr. Hardwicke, four times the amount of oxygen that is consumed by an average man. "The excreta of so many horses adds also to the sources by which atmospheric air is often tainted." Although Paddington may fairly rank as one of the densely populated quarters of London, the death-rate has only amounted to 19·6 per thousand living. The epidemics of small-pox and scarlet fever seem to have been as fatal in this as in other metropolitan parishes. Dr. Hardwicke regrets the amount of overcrowding which exists in the dwellings of the poor, and suggests that houses, like cabs and omnibuses, should be licensed "to carry so many persons inside." It seems that many persons complain of the annoyance arising from the increasing practice of poultry keeping. "Cock-crowing at one A.M., the barking of dogs, the cooing of pigeons near your chamber window.....is a serious annoyance." Dr. Hardwicke wishes to make noisy animals amenable to the same laws as German bands and barrel organs, and to give us the power of ordering chanticleer to proclaim the dawn in the next street. Strangely enough, the harmless necessary cat is not included in his list of noisy animals. It seems hardly credible that there should be but five public urinals in the parish of Paddington, yet such is really the case. Dr. Hardwicke very properly suggests that at least ten more should be added. Among other suggestions contained in this Report is one for a public disinfecting establishment and a laundry for washing the infected clothing, and another for a public work-room, where needlewomen might be enabled to pursue their employment under better hygienic conditions. The Report is exceedingly valuable and interesting, and one upon which the parish and its medical officers are alike to be congratulated.

Mr. William Sharpe should consult a respectable man in his own neighbourhood, and be guided by him as to the necessity of having farther advice. We cannot return private answers.

Enquirer.—The nurse is clearly entitled to the usual fee. The engagement was not broken by the nurse, whom the lady chose her own time for engaging.

THE LATE CAMPAIGN.

To the Editor of THE LANCET.

SIR,—The recent campaign has, doubtless, excited much interest in the condition of the army medical service; and, as one of the officers engaged in the late manœuvres, I am glad to contribute the result of my experience as to the manner in which the responsible duties of the medical department were performed.

In the first place, I can pleasurably bear testimony to the fact that on no occasion did I send a requisition to the proper quarter without its receiving immediate and courteous attention. I must admit that, in consequence of the novelty of my position, and possessing no authoritative instructions, I was just at first a little perplexed as to how I could best arrange for such casualties as might arise amongst the 700 men encamped under my care. This little difficulty was quickly overcome, for every information was easily obtained at the office of the P.M.O. The necessary requisitions being sent, I found myself in a few hours in possession of a complete hospital, furnished with *matériel* for fifteen beds, together with a field companion, containing a very useful selection of drugs and appliances. This latter was supplemented by a supply of medicines brought by myself, in accordance with orders previously published. An ambulance visited the camp daily, and could be obtained on requisition at any time for the removal to the general hospital of any case of infection or serious illness that, in the opinion of the medical officer, could be better treated in a permanent building. No obstructive circumlocution was necessary; the patient was admitted on the presentation of a certificate from the surgeon. While marching, and on every field day, the regiment was followed by an ambulance containing a supply of water for the sick, and accompanied by my hospital orderly with the "field companion"; in addition to which, two panniers, containing drugs and medical comforts, were sent with each brigade of troops. Daily as well as weekly reports were sent to the P.M.O., who was thereby fully informed of all matters of medical interest that occurred in the camp. Instructions were sent daily from the P.M.O., detailing and nominating medical officers for special duties, and warning the next in rotation both for depôt and field work. The advantages of these orders, emanating from the fountain-head, are obvious. Admirable little books are issued "by authority" on Encampments and other military subjects at the small cost of sixpence, detailing the duties and requirements of all officers, except those of the surgeon. If the Horse Guards were to issue a similar little work, describing and detailing the duties and requirements of the medical officers both in camp and barracks, I cannot help thinking that it would be hailed as a boon to the profession.

I am, Sir, yours, &c.,
Hampstead, October, 1871. A SURGEON TO A MILITIA REGIMENT.

A Brother of the Order (of S. Luke) writes that "Meddyg" will obtain every information respecting the Brotherhood of the above Order by applying at S. Alban's Chapter House, Holborn.

G.—1. We do not know of any beyond the Sydenham Society's translation of Hecker's Epidemics of the Middle Ages.—2. Macnamara on Cholera.

Rev. W. G. Davies, (Abergavenny.)—The communication has been received.

COMMUNISTS AND ALIENISTS.

DR. LEGRAND DU SAULLE, a French physician, in imitation of Dr. Starcke, of Stuttgardt, is about to publish a book on the Mental State of the Parisians—especially of the Communists and their hostages, whom he visited in prison. Under the Commune the National Guards brought to the depôt only two madmen per diem, instead of the average number (between seven and twelve). Delirium tremens was largely represented among them, as well as a form of madness produced by fear and suspicion. Capt. Rossel's brain, he hints, was affected by the thought that the French army had been betrayed. Interesting details will be furnished by the doctor as to the mental state of poor President Bonjean, whose life was sacrificed by the Prefect of Police having, while intoxicated, signed a wrong name to the order for Bonjean's removal to the Hospice Dubois. The order was, of course, disregarded, and Bonjean, detained in his cell, was only liberated to be shot. Ferré, it seems, ordered a gendarme, who had lost his reason, and was in a strait waistcoat, to be shot. The keeper remonstrated: "Madmen are not shot." Ferré remained silent; but on the keeper pointing out other victims to the leader of the firing party, the lunatic was spared. Rich as French literature is in works on moral insanity, Dr. Legrand du Saulle may be expected to heighten its scientific as well as its sensational attractions.

Mr. Harris, (Plymouth.)—The preparation of a block for the illustration would be attended with some expense. Is it necessary?

Inquirer can, perhaps, furnish us with the title, or supposed title, of the article to which reference is made.

TREATMENT OF INFANTILE DIARRHŒA.

To the Editor of THE LANCET.

SIR,—I have carefully read your article, and find you have made two important omissions: one in food, the other in medicine. You say: "It is curious to see how, even in homes where every care is taken in securing and preparing the infant's food, the cow's milk, which hitherto may have agreed well with it, will all of a sudden act upon the child as though it contained elaterium or tartar emetic." This is a faithful picture drawn from life, one which is to be met with every day in all classes of society. It is at this stage that the article of food to which I would draw your attention—viz., the Swiss Preserved Milk—will be found so valuable. It can be taken and retained when every other article of food is at once rejected. It is pleasant and agreeable to the child; it quenches that urgent thirst which is always present in such cases, and it is unaffected by the abnormal acids of the stomach—a consideration of no small importance. I have used this milk in such cases for two years, and I can honestly say that, as an article of diet in infantile diarrhœa, it is not to be surpassed; and if I were to add that as yet it has not an equal, I should not be saying too much in its favour.

To your second omission—on medicine—I would now, with your permission, draw your attention. It is to the trisnitrate of bismuth to which I refer. This you have altogether omitted from your list of remedial agents. My first acquaintance with the value of bismuth in infantile diarrhœa was as follows:—Two years ago a delicate child was brought to me from Huddersfield—"the only boy." The diarrhœa, irritability of stomach, and profuse perspirations were most urgent, threatening with their combined influence to overwhelm the little sufferer, and that in a very short time. Almost every form of diarrhœa medicine was tested from time to time, including the old chalk mixture, sulphuric acid, opium, kino, logwood, catechu, &c., alone or in combination. Such form of medicine seemed to be followed with good results for a time; but the vomiting and diarrhœa returned again and again. At the time I had under my care a lady suffering from cancer of the stomach, the most urgent symptoms being continuous vomiting and great pain, who had derived more benefit from full and frequently repeated doses of bismuth than from anything she had ever taken. Thinking this case over, I determined to try the bismuth with the child. I gave it in simple water, with a little syrup of poppy, every two hours. After the third dose all vomiting ceased, and in twenty-four hours the urgent symptoms of diarrhœa had passed away; the profuse clammy perspiration had given way to uniform warmth of skin; the deeply sunken and half-glazed eye had, as it were, been lifted up in its orbit; and the child had altogether a changed appearance. In a week it was quite well, well enough to be removed to Margate for change. In this case the Swiss milk was of great value. In what precise way bismuth acts so beneficially in such cases I am not quite prepared to say; but I am disposed to believe that it acts mechanically as well as chemically on the irritable mucous membrane of the stomach and bowels. This view I am the more disposed to adopt, seeing that the fluid preparations of bismuth do not act so satisfactorily as the powder. I have used bismuth in a large number of cases of infantile diarrhœa during the last two years with the most satisfactory results, so much so that I have now abandoned the "old chalk" with many of its allies.

You must pardon me for troubling you with so long a letter on so small a matter; though small, nevertheless valuable. I wish it to be fully understood that this is *not* put forward as *a new remedy*; but as you have omitted it in your list of remedial agents, available in so urgent a disease as infantile diarrhœa, I deem it to be my duty to call your attention to it, and through you that of the profession, that it may be fully and fairly tested, and that it may stand or fall by its real worth or worthlessness as extended experience may dictate. The usual formula is something as follows:—Bismuth, half a drachm; syrup of poppies, one drachm; water to an ounce and a half: a teaspoonful every two or three hours for a child from four to six months; a child of twelve months will take twice the above-named dose.

Sutherland-street, S.W., September, 1871. THOMAS CHAMBERS.

CURARE (WOORARA POISON).

A CORRESPONDENT, having endeavoured in vain to procure from several druggists some curare for experiments on animals, would be glad to know where it can be obtained.

M. A. is evidently unaware that his friend of former years was for some time before his decease incapacitated for all duty by disease of a distressing character.

THE communication of *Mr. J. Pestwich* shall have our attention.

CORONERS' INQUESTS.

THE medical statistics of England and Wales show that 25,376 inquests were held by coroners during the year 1870, which resulted in the following verdicts:—Murder, manslaughter, and justifiable homicide, 442; suicide, 1562; found dead, 2857; accidental death, 10,908; injuries from causes unknown, 175. In addition to these, we find a group of verdicts classed under the head of "natural death": from excessive drinking, 316; disease aggravated by neglect, 128; want, cold, exposure, &c., 320; other causes, 8895. No doubt these 9659 persons died a "natural death," in so far as it is natural for people to die when their vital power is sapped, wasted, or destroyed; but it is a very fine distinction to draw between the man who commits suicide by any of the customary brief methods, and he who deliberately puts an enemy into his mouth to steal away his brains first and his life afterwards. Again, it is natural enough that an old man or woman, or a young child, should die if exposed to want and cold; but it is most unnatural that such cases should ever arise in a country boasting itself to be Christian. The nomenclature of verdicts stands in need of revision. It is to be noted that 29 per cent. of the inquests in 1870 were held on infants and children under seven years of age, whereof 6 per cent. were illegitimate. The average cost of each inquest in 1870 was £3 2s. 4d., including the salaries and travelling allowances of the coroners.

B. A.—He requires to possess either a German diploma or a licence from the Government authorities.

A CORRESPONDENT speaks highly from personal experience of decoction of the bark of the buckthorn-tree as an aperient. It is a remedy used by some English practitioners.

Mr. T. R. Bates had better take the opinion of his usual medical attendant in the matter.

FRASER'S PATENT DISINFECTING APPARATUS.

To the Editor of THE LANCET.

SIR,—Our attention has been drawn to your remarks on our disinfecting apparatus in your issue of the 16th inst.; and as there are one or two points which, if unexplained, may do us injury, we shall be glad if you will allow this to appear in your next.

Our chamber is not necessarily made of iron, but is generally built (as we prefer it) in brickwork. It is heated, as you say, by a furnace; but this has also heating flues, connecting it with the chimney. An outlet, or ventilating flue, exists in the top of the chamber, through which the dangerous vapours given off by disinfection are drawn into the closed ashpit, and from thence pass through the fire, and are entirely consumed. They are, therefore, not only "supposed to be" drawn from the inside of the "chamber through the fire," but *must* be so—a feature in our patent apparatus which, we submit, must in crowded localities prove of the greatest value, as we have frequently seen dense volumes of foul and infected air (liberated from the bedding &c. by the heat) pass through the fire and burn, which would otherwise escape into the atmosphere, to condense and fall in the immediate neighbourhood of the apparatus.

As to your remarks about cost. If the chamber is intended for the use of infirmaries or public establishments, we can erect a large chamber for £90, and this includes the brickwork, racks for bedding, thermometers, and everything necessary for the working. When the apparatus is intended for the use of large districts or towns, and the infected clothes have to pass through the streets, a closed iron truck, fitted with racks, is supplied, and the articles are placed in the carriage. It is then with its contents run into the chamber, and there disinfected. The greatest cost of the apparatus, including the carriage, is £130, and this also includes the shed or building in which the chamber is erected. Frequently £115 covers all the cost. This is not a large sum for a parish or town to expend for sanitary purposes.

We are, Sir, yours faithfully,

Commercial-road East, Sept. 25th, 1871. FRASER BROTHERS.

Country G.P.—A man may contract the soft venereal ulcer any number of times; but it is rarely the case that syphilis repeats itself in the same body. If a patient had suffered from a well-marked primary lesion, attended with induration in the chancre and neighbouring glands, which was followed by secondary manifestations on the skin and mucous membranes, he would not again contract a disease exhibiting these phenomena. Of course, there are exceptions; but such is the rule, nevertheless. Our correspondent may refer to M. Diday's observations.

Dr. MeRae (Fettercairn) will find that his communication on "Acupressure" has been already inserted.

An Enquirer.—At the meeting of the General Medical Council in July last the following gentlemen were elected members of the Executive Committee:—Dr. Paget (President), Dr. Bennett, Dr. Acland, Dr. Andrew Wood, Dr. A. Smith, Dr. Sharpey, and Dr. Quain—i. e., four members from the English, one from the Scotch, and one from the Irish Branch Councils.

PROFESSIONAL ETIQUETTE.

To the Editor of THE LANCET.

SIR,—The great importance of this subject being thoroughly understood and strictly attended to by every medical man induces me to ask if an exception should not be made to the general rule, "that no medical man shall visit professionally the patient of another without his knowledge and consent," in case a medical man receives an urgent request from the friends of the patient to do so, in the belief that he or she is in "immediate danger," and the advice of the ordinary attendant not being at once procurable? Such a case has happened to me more than once, when I have been somewhat uncertain how to act, so as to satisfy my professional brother and also his patient. I am, Sir, yours truly,

Kibworth, October 3rd, 1871. W. N. HEYGATE.

*** The element of real danger makes the case exceptional; but the ordinary attendant should, of course, be communicated with as soon as possible, and the case given over into his hands.—ED. L.

SULPHURETTED HYDROGEN.

ACCORDING to Jacob Myers, sulphuretted hydrogen gas, prepared in the ordinary manner, is very liable to be contaminated with traces of arsenuretted hydrogen, these two gases being capable of existing together at ordinary temperatures without chemical action taking place between them; but at higher temperatures, and before the temperature reaches the boiling point of mercury, they decompose one another according to the following equation:—$3\,H_2\,S + 2\,As\,H_3 = As_2\,S_3 + 6\,H_2$; and yellow sulphuret of arsenic and pure hydrogen result. Sulphuretted hydrogen gas is itself decomposed into sulphur and hydrogen at temperatures between 350° and 400° (centigrade). In some text-books the temperature at which this decomposition occurs is given as high as a red heat.—(Liebig's Annalen for July, 1871, pp. 126 and 127.)

Mr. Joseph Wigleworth.—We must refer our correspondent to the details given in the Calendar of the University.

Enquirer might apply to Mr. Poupard, Blackfriars-road.

THE ROTUNDO LYING-IN HOSPITAL, DUBLIN.

To the Editor of THE LANCET.

SIR,—Your journal of the 16th and 23rd instant respectively contain letters bringing charges against the hospital and myself, which, if allowed to remain unanswered, might lead your readers to suppose that the statements therein made were true. I trust, therefore, you will give me the opportunity of refuting them.

In the first instance, I beg leave to say that the quotation alluded to—viz., "that the hospital contains 130 beds"—is correct; but all these beds are not occupied at the same time, and never were intended to be so, as the system of using the wards by rotation has always been acted on here. Twenty-five of these beds are appropriated to diseases of females; but in this, as in many hospitals, the number of patients fluctuate considerably at different seasons; for instance, at present there are only fifteen chronic patients in the wards, whereas in the spring we had our full complement of them.

With regard to "clinical instruction not been given," I beg leave to say that it is my invariable habit to visit the wards morning and evening, when all the pupils have the opportunity of studying the symptoms and treatment, and I point out to those attending anything of interest connected with the different cases, and am always most willing to supply information to those seeking it. I may also add that in our examination-room there is every morning an average attendance of some dozen cases of female complaints, which the pupils have the privilege of seeing, and are taught the method of using the speculum, and making themselves familiar with the various forms of uterine and vaginal diseases, &c.

Some of the arrangements complained of (as, for instance, visiting the wards, making examinations, performing operations, &c.) are long established rules of the institution, necessary for the maintenance of discipline and for the well-being of the patients, and which, therefore, need no comment from me.

As to the accommodation for pupils, I have to inform you that there are five bed-rooms, each containing one bed, and two large rooms (24 feet long by 15 feet wide and 13 feet high), in each of which two beds are placed. Some pupils prefer them to the smaller single rooms, from their being larger and more airy. It has happened on some few occasions, and for a very brief period, that the number of intern pupils has exceeded that above stated, and, no other place being available, they are accommodated in a large room, temporarily fitted up for the occasion; but every pupil is informed on his entrance of the arrangements provided for him, when it is optional on his part to accept or decline it.

As to the number of labour cases a pupil may attend, let me say that they depend mainly on his own diligence and assiduity; for, besides the cases in the hospital, there are frequent extern cases, which, if he pleases, he can take charge of, several pupils having had as many as fifty and sixty cases in three months, and some having in their six months' sojourn here as many as 200 cases, besides being present at numerous others, instrumental, preternatural, and complex.

With regard to "the midwife" (head, I presume), I beg leave to say that she never interferes with a case beyond giving her advice to the pupils, and occasionally pointing out to them, in the absence of myself or the assistant-physician, the manner in which the perineum should be supported, the uterus followed down, the proper application of the binder, &c., for which hints the gentlemen in general are most thankful. In instrumental deliveries she is sometimes called on (particularly where the pupil having charge of the case has not had sufficient experience) to give the proper support to the perineum, and assist the expulsion of the child's head. And I must here add that, holding the position which she has done for the last twenty years, both with credit to herself and the full appreciation of every master under whom she has served, she has ever been deservedly esteemed by the pupils, being always most respectful, and never presuming except where absolutely required.

I forbear to express my opinion on the purport of these letters, or the reasons for their having been written, leaving it to your readers to draw their own conclusion on this point. Yours truly,

G. JOHNSTON,
September 27th, 1871. Master, Rotundo Lying-in Hospital, Dublin.

To the Editor of THE LANCET.

SIR,—The remarks in my last letter about the number of pupils sleeping in each bed-room in the Rotundo Hospital were intended not so much to show the deficiency of the accommodation as the manner in which the number of interns, as stated in the prospectus, was exceeded; each additional intern above the number of seven diminishing the amount of practice due to each man, and being a direct breach of contract on the part of the master.

No complaint was made about the accommodation; but, as it has been mentioned by "An Old Intern," I may state that it is not fit for gentlemen at the present time. I would, however, have cheerfully put up with it as it was if I had obtained anything like the advantages mentioned in your correspondent's letter, or even if there was some clinical instruction on the small number of cases admitted. "An Old Intern" states that the opportunities for practice have not diminished since his time. I can only state that the number of cases per annum is much less than in former years. The assertion made by your correspondent, that "Medicus" and myself wished to perform operations, is totally unfounded; but we did wish to be allowed to pass a catheter, order an enema or a dose of ergot if necessary, and to be allowed to *assist* at an operation, instead of being supplanted by the head midwife. "An Old Intern" remarks about my wishing to examine a case of craniotomy, that I should have learned nothing from it, and that every other student would expect to do likewise. I was on *duty* at the time, and it was my *right* to examine. No other student, unless asked specially by the master or assistant-physician, would have dreamed of touching the case.

There is no denial of the fact that there is no clinical instruction imparted by the master. I think I may state here that he is, at the most, thirty minutes going round, and in that time sees more than thirty cases, being less than a minute to each case; thus, of course, allowing *ample* time for clinical remarks. The statement that the number of beds is forty less than is stated in the prospectus is also totally ignored.

There have been certain direct charges made against the institution and the master, which have not been answered in the slightest degree by "An Old Intern," who also seems to think that no improvements should have taken place in twenty years, to say nothing about any retrogression.

I should like to make one other statement that of itself shows there is "something rotten in the state of Denmark." The regulations for the diploma of the hospital require everyone intending to become a L.M. to attend the hospital for six months. Is it a fact that during the last fortnight the diploma was given to a gentleman who had only been about the hospital for three months? I told the master that I had written the last letter, and he assured me that he would answer it in this week's LANCET. If he is the "Old Intern," I consider that he has not contradicted a single statement.

In conclusion, I say that I can substantiate every statement I have made, and remain, Yours obediently,
Dublin, October 1st, 1871. HY. YATE PIPPS, M.R.C.S.E.

Inquirer.—There is no restriction whatever in the relief of sickness, and the relieving officer is equally bound to give an order for medical attendance on a sick illegitimate child as in other cases. If the child were to die for want of it, the relieving officer would be open to the charge of manslaughter. A person who has just drawn £10 for wages cannot be considered "destitute," and the relieving officer would not be justified in granting him a medical order. The order given should, however, be attended to, and the case should be laid before the guardians, who have power to cancel it, and to authorise the medical officer to charge for his attendance.

THE PUFF OBLIQUE.

WE have been favoured with a copy of the *Shrewsbury Chronicle* of the 29th ult., which contains a paragraph headed "Presentation to a Medical Man." This paragraph, copied from one of the back numbers of *Excelsior, or Murray Royal Institution Literary Gazette*, recites how, on Dec. 28th, 1866 (not more than five years ago!), Dr. J. R. M'Lintock (now resident at Church Stretton) was presented by the staff of Murray's Royal Institution with a gold watch, &c. &c. We do not care to copy the entire paragraph (for it includes a ball, a supper, "an excellent address," and all sorts of other nice things), but take leave to question the good taste of parading before the public the practical results of popularity in the case of a medical man who acquired them five years ago, simply because he is "now resident at Church Stretton."

THE communication of *Mr. J. Farrar* (York) has been received.

TREATMENT OF PSORIASIS.

To the Editor of THE LANCET.

SIR,—Will you or some of your readers kindly give me advice regarding the following case?

A lady, aged about fifty-five, is the subject of psoriasis, which she has had since June last; there is also thickening of the left knee-joint. I do not think that there is any syphilitic taint. She is the mother of a large family, all healthy. The disease first commenced with red spots, scaly, and raised above the surface surrounding them; but they have increased very much of late both in size and number. I applied blisters to the left knee, and now the seat of the blisters has become one red mass, not forming an open sore, but evidently affected by the same skin disease. There are pains in the left leg, and indeed flying about the body from place to place. The treatment adopted has been arsenic, iodide of potassium, and sarsaparilla, vegetables and lemons; tar ointment to be applied to some of the spots, and Wright's liq. carbonis deterg. to others. As yet, however, there has been little change. There is great depression of spirits, but she is otherwise healthy. What are the chances of recovery in such a case, and what are the best remedies? I am, Sir, yours faithfully.
October, 1871. JUVENIS, M.D.

Dr. Leslie.—We have received our correspondent's letter. The statements to which he refers were made by Mr. Kempster before the Medical Council, and reported in the usual way. The insertion of Dr. Leslie's letter would place us in a position with reference to Mr. Kempster of which the latter might fairly complain, seeing that the communication contains statements which are libellous.

HAY FEVER.

A CORRESPONDENT is desirous of ascertaining whether a confirmed snuff-taker ever suffers from hay fever?

Dr. Clouston.—The remedy alluded to by our correspondent is an American production. It can be obtained of Messrs. Savory and Moore, Bond-street. We know it has been tried in one case as an experiment, and the patient thought with benefit, but not with more than resulted from other remedies he had previously tried. Does it contain belladonna or its alkaloid?

Mr. A. F. Edwards.—The paper is in the hands of the printer. When we inform our correspondent that the number of contributions awaiting insertion is very considerable, he will be indulgent, seeing that his paper has been so short a time in our possession.

DOWN WITH THE "DUST-BIN."

WE have repeatedly denounced the folly and danger of storing up a mass of putrefying refuse in the areas of our houses. In the close courts of the poor the stench given off from the dust-bin is one of the most frequent sources of fever and disease. Local Boards for years past have been insisting upon the erection of these receptacles; but we are delighted to observe that the City Sewers Commissioners have resolved to revert to the old-fashioned and more wholesome system of scavenging. They have published a list of streets in which the inhabitants are required to deposit before eight o'clock in the morning daily, excepting Sundays, on the kerb-stone of the foot-pavement, in a box or barrel, all ashes, dust, &c., from their respective premises, so that the same may be promptly removed by the scavengers. What excellent news. No more fees to dustmen; no more question as to what is refuse. But if the arrangement is desirable for some streets, why not for all?

A would-be M.D. should ascertain by application to the Registrar whether the degree he alludes to could be registered. The University of St. Andrews has the power of conferring its degrees in Medicine upon ten practitioners annually.

Inquirens.—Three guineas would in our judgment be a fair remuneration for the particular service.

THE INQUEST AT BRACKLEY.

To the Editor of THE LANCET.

SIR,—I much regret that professional occupations have prevented me from making a few remarks upon an inquest held at Brackley in an obstetric case, and reported in THE LANCET of the 2nd ult.

The verdict was, "Accidentally killed by the use of the forceps," and the opinion of Drs. James Taylor and Waters was that the wound in the posterior wall of the vagina was caused by the forceps. To the verdict I take exception, and from the opinion of Drs. Taylor and Waters I dissent, because they had no means of proving it, although they performed a post-mortem examination. All they could prove by the examination was simply that there was a wound in the posterior wall of the vagina, but how caused or produced is the question at issue.

As I have been in the constant practice of midwifery for thirty years, I have seen cases of all kind—two, where the posterior wall of the vagina was extensively lacerated, but *without* the use of instruments, and where the accident was entirely beyond the control of any practitioner, however careful. In one case the perineum was not lacerated, and in the other to a moderate extent, without in any way interfering with the rectum. Both cases did well, but the convalescence was a little more tedious than usual. In the case where the perineum was not lacerated, the hæmorrhage from the laceration of the posterior vaginal wall was alarming and dangerous.

As medical practitioners, we ought to be particularly guarded how we give an opinion upon the practice of our brethren, and if there be a doubt I think the practitioner implicated ought to have the benefit of it.

Now I have proved that laceration of the vaginal membrane may take place without the use of instruments, and that in exactly the same portion of the membrane as in the case at Brackley; I think I am therefore at liberty to take exception to the verdict, and to dissent from the opinions of Drs. Taylor and Waters, and say that their case is not proved, and that Dr. M'Millan has been harshly and unjustly dealt with. I may say with confidence that if this case had been heard before any of the superior courts, the verdict would have been "Not Guilty." I leave the profession to decide.

Yours faithfully,

Croydon, October 4th, 1871. EDWARD BERNEY, F.R.C.S.

M.D. will see that it is out of our power to state the exact manner in which the remedy was used, or the extent over which it was applied. Perhaps it would be most judicious not to employ the remedy in future. Our correspondent will find an article on the question in the current number of the *Practitioner*.

H. P. S.—The testimonial to Sir James Paget is, we are informed, the result of a private movement of his old friends and pupils, having for its object the addition of a portrait by a first-class artist to the worthies of the St. Bartholomew's Hospital collection. The suggested benevolent fund would, we fear, not meet with the support of those interested in the matter.

M.R.C.S.—The sum of £100 is a fair offer.

HYDRATE OF CHLORAL.

To the Editor of THE LANCET.

SIR,—I shall feel much obliged if any of your medical correspondents will have the kindness to inform me whether in the course of their practice they have found the habitual and continued use of the hydrate of chloral to be productive of constitutional depression. I have been in the habit of taking thirty-five grains nightly for the last eighteen months.

Yours faithfully,

Thetford Oct. 2nd, 1871. A CONSTANT SUBSCRIBER.

Dr. D. B. von Cavania, (Leeds.)—We fully concur with our correspondent in thinking that it would be well to call the attention of the authorities to the subject; but it is, we fear, useless to do so without clear evidence that the terms of the Medical Act have been infringed.

Mr. H. Hossack had better consult some respectable practitioner. We cannot recommend one by name, and it would be quite unnecessary to do so. We cannot undertake to furnish private answers.

An Inquirer.—Forty weeks is the usual period.

Mr. John H. Wraith (Darwen) is not the only person who receives circulars of the kind enclosed. They appear to be nearly as profusely shed abroad as the leaves from the trees at this season, and they probably obtain about the same amount of attention.

THE PLYMOUTH WORKHOUSE INFECTIOUS WARD.

IT is very important that infectious wards should be properly isolated. That at Plymouth was erected in 1869 on plans approved by the inspector of the Poor-law Board, and is a complete failure. The window is so near the workhouse that small-pox has extended to the healthy workhouse inmates. One pauper has died, and eight others are ill. The cases are now about to be removed to a detached building. It is, however, too late to shut the door when the horse is stolen.

Once a Doctor.—Our correspondent's enclosure has been received, and is under consideration.

RAILWAY PASSENGERS' ASSURANCE.

To the Editor of THE LANCET.

SIR,—The correspondence of Mr. Ewens, of Cerne Abbas, published in your last week's issue, opens a question of great interest to your country readers. I trust the subject will be by your assistance thoroughly ventilated. In this district I know much dissatisfaction exists as to the manner in which the referees behave, some of whom even act as agents for the Company, an arrangement which I am sure the bulk of the profession cannot approve of. Let us consider how this works. Another man's patient is canvassed (perhaps not by design) by the "medical agent." After being pestered he insures, gets his policy, and pays his premium &c. to the medical agent. He meets with an accident. What happens? (The class of men who most frequently insure must be borne in mind.) Very often he sends for the medical agent—not for his ordinary medical attendant. And why? Because he thinks to propitiate the medical agent by so doing, and thereby fancies he will get better terms from that officer. (This is not an imaginary case; such a one has occurred to me.) What position does the medical agent now take? He accepts three offices—viz., agent and medical referee to the Company, and medical attendant to the patient. I know that the Company has accepted this arrangement; therefore I argue, if they can have such complete confidence in the perfect justness of one member of the profession, why not in all, and so do away with the appointment of medical referee? Surely, if any extraordinary case occurred, Mr. Holt, their consulting surgeon, could easily secure the services of an impartial man in any town, especially as he possesses the means of acquainting himself of any man's professional status. The office would gain by this alteration, as at present many gentlemen have a strong prejudice (and not without reason) against the office, feeling that by their patients becoming insurers they run a risk of losing them. What I would suggest is that Mr. B. Holt be requested, on behalf of his provincial brethren, to bring this matter before the Board of the Railway Passengers' Assurance Company. I shall be happy to receive the names of gentlemen agreeing with me in this ready cure for the heartburnings arising from the working of the system at present adopted by this Company.

I am, Sir, yours obediently,

Pitney House, Yeovil, Oct. 2nd, 1871. E. C. GARLAND.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Humphry, Cambridge; Mr. Le Gros Clark; Sir A. Taylor; Dr. Basham; Dr. Oldham; Dr. Johnston; Mr. Latham; Mr. Lock; Mr. Shepheard; Dr. Allan, Harrington; Mr. Wilton; Dr. Sims; Dr. Farrington, Penshurst; Mr. Wright, Epsom; Mr. Anderson, Coventry; Mr. Stansfeld, Bristol; Dr. Holland; Mr. Brazier, Aberdeen; Mr. Duncan, St. Andrews; Rev. J. W. Davies, Abergavenny; Mr. Sedgwick; Mr. Clarke; Mr. Henry; Mr. Cunningham; Mr. Morris; Dr. Cheadle; Mr. Turney; Dr. West; Mr. May, Holloway; Mr. Curry; Mr. Brydon, Exeter; Mr. Goyder Dr. Phillips; Mr. Barnard, Sutton; Mr. Hall; Mr. Morgan, Leicester; Mr. Langston; Mr. Wheeler; Mr. Prestwich, Oldham; Mr. M'Kaye; Mr. Polson, Spalding; Mr. J. Hope, Reading; Mr. Hunt; Mr. Shepherd, Hampstead; Mr. Fairland; Dr. Dixon; Mr. Harris, Plymouth, West Indies; Mr. Tomlin; Dr. Thomson, Braemar; Dr. Milford, Sydney; Mr. Evans, Cardiff; Mr. Pritchard; Mr. Barnehson, Liverpool; Mr. Barber; Mr. Moore; Mr. Turner; Mr. Hammond; Dr. Tate; Dr. Bastian; Dr. Bradbury, Cambridge; Mr. Hanland; Mr. Henry, Truro; Mr. Sharpe; Mr. Bamford; Mr. Heygate; Mr. Moffatt; Dr. J. B. Smith; Dr. Dale; Mr. Bates; Dr. Leslie; Dr. Rose; Dr. Edmunds; Mr. Barrows, Springfield; Mr. Berney, Croydon; Dr. Lewis, Paisley; Mr. J. H. Wraith, Over Darwen; Mr. White; Mr. Rorke; Mr. Scott; Mr. Graham, Oundle; Dr. Harding, Whittlesea; Dr. Martin; Mr. J. Wallace; Mr. Chapman; Mr. Evenly; Mr. Madden; Mr. Griffith, Penkridge; Dr. Garland, Yeovil; Dr. von Cavania, Leeds; Mr. Saunders; Mr. Walters; Mr. Ellis, Tipton; Mr. Collard; Mr. Wigleswortb, Liverpool; Dr. Moir, Glasgow; Dr. Lowe, Lynn; Dr. Dougall; Mr. Gilbert; Mr. Swan; Dr. Murry; Mr. Layton, Woodford; Mr. J. Anderton; Mr. Bolton, Leicester; Dr. Black, Birmingham; Dr. Farrar, Bow Bridge; Mr. Edwards, Wivelscombe; Mr. Grove; Dr. Gramshaw, Walton-on-the-Naze; Mr. Stevens; Dr. Steele; Mr. Gater; Mr. Trenery; A M.D. of New York; Nature; Juvenis, M.D.; B. A.; L.M.; Once a Doctor; M.R.C.S.; A Brother of the Order of St. Luke; Alpha; Country General Practitioner; X. Y. Z.; Medico; &c. &c.

Bradford Observer, Parochial Critic, Chatham News, United Service Gazette, Weston Mercury, Overland Star of India, Colonial Standard, Birmingham Daily Post, Shrewsbury Chronicle, Journal of Mental Science, Epsomian, Surrey News, Veterinarian, Food Journal, Camden Town Gazette, and *Waterford Chronicle* have been received.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under	£0	4	6	For half a page	£2 12 0
For every additional line	0	0	6	For a page	5 0 0

The average number of words in each line is eleven.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday; those from the country must be accompanied by a remittance.